ABSTRACT
OF THE
Croonian Lectures
ON
DISEASE AND ITS REMEDIAL TREATMENT.

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LECTURE I.

MANY writers have tried their hands at defining disease. An exact definition, or at least one that shall meet with universal assent, is perhaps impossible in the present state of knowledge. Opinions differ with regard to points of fundamental importance, and the limits of health and disease are not well marked. Mr. Simon considers nearly every disease to be the normal result of a special cause, the only thing abnormal in each case being the presence of the cause; and that in the process itself there is nothing supernatural or mysterious. According to this view the biography of every disease comprises some specific cause and certain resulting phenomena—vital, chemical, mechanical,—which produce the signs by which we recognise the disease. For instance, in scabies, or tinea tonsurans, the cause is obviously the parasite; and the phenomena resulting, certain local inflammatory conditions fairly characteristic. Both of these must be included in the idea of the disease, since neither alone suffices. What is meant by the term "scarlet fever"? A specific contagious particle gives scarlet fever, and causes certain phenomena. But the poison alone is not the disease; neither are the phenomena, which, or others apparently identical, are sometimes combined in a person not suffering from this exanthem. Here the notion of the disease will obviously include both symptoms and cause. So, too, with acute rheumatism, and so with the neoplasms, tubercle, cancer, &c. Thus we may define disease as a complex of some deleterious agency acting on the body, and the phenomena, actual and potential, due to the operation of that agency.

The difficulties besetting the question, What is disease? have not yet been explained away. Are we to regard as diseases congenital malformations, inherited tendencies, and the degenerative changes that take place in various organs as we grow old, and that ultimately cause death? Here disease and health blend, and the boundary line is theoretical, if not arbitrary. Congenital malformations may be looked on as diseases from a double point of view—as the results of abnormal causes, and as the starting-points, in many cases, of grave morbid processes. In inherited proclivities, it might be argued, a different cause is at work from that which produces the resulting disease in those of healthy ancestry, and therefore cause must be eliminated from our conception of disease. But probably in each case the essential cause is the same, the system in the one being more ready to respond than in the other. Secondly, in some other forms of disease, especially forms of inflammation and tumours, it may be said that the cause soon ceases to exert any specific influence, and so the morbid phenomena alone must be held to constitute the disease. We are, it is true, apt to consider and speak of these processes apart from their cause. Nevertheless, in those forms of inflammation to which we give a specific name, we recognise the cause as essential to our conception. Examples of this might be multiplied indefinitely. This view can only be called in question in the case of those inflammations that are due to the local operation of mechanical and chemical causes; but even there the cause modifies the result, especially when that cause is in constant operation. A somewhat similar difficulty surrounds the subject of morbid growths, especially those that are innocent in nature.

Thirdly, our conception of disease involves not only the pathological changes springing from morbid causes, but these involve others, and those others a tertiary series, and so on continuously. Examples of such complex consequences are to be seen in rheumatism, syphilis, &c. Where is the line to be drawn between the primary and secondary disease? Every day we speak of as diseases conditions, such as ascites, jaundice, dyspepsia, which are really symptoms of some deeper-seated affection; and if this conception of disease be the true one, every separate consequence should be deemed a disease, taking into consideration its cause as well as its presence. When the consequences are numerous and complex, as in scarlet fever, which are we to regard as constituting the primary disease? The answer is—those morbid conditions which spring directly from the operation of its contagium, and not those which survive the disappearance of the contagium, save those which, having originated under its influence, are in process of amendment at the time of its dissolution. The practical difficulty of determining the exact period at which the primary disease ceases to operate does not involve the essential truth of the proposition. Remains of previous disease in the body which have become inert—as calcified hydatid or tubercle—can only be regarded still in the light of diseases when they act mechanically or otherwise as the cause of other phenomena. The definition given already is thus as applicable to disease in the more comprehensive sense of the word as to the parts of each disease taken separately.

Without attempting anything like a complete classification of disease, certain groups may be enumerated into which most diseases with which we are acquainted seem naturally to fall. These are (1) functional diseases, the result of changes of intimate structure and chemical changes unknown to us. (2) Those originating in excess, deficiency, or improper quality of nourishment. (3) Those due to retained excretions. (4) Those due to the action of poisons, vegetable, animal, and inorganic. (5) Those originating in mechanical causes, as narrowing of tubes, &c. (6) Parasitic diseases. (7) Inflammatory affections, tubercle and other proliferating neoplasms. (8) Diseases originating by contagion.

The mechanical group, which is the most simple, may be illustrated by the hypertrophy and dilatation of the left ventricle secondary to aortic constriction, and the corresponding changes in the portion of the bowel above a stricture. In all such cases the muscular wall becomes hypertrophied, not in consequence of any conservative instinct, but according to the ordinary physiological law that muscular tissue tends to become more powerful within certain limits according to the force required. It is conservative by accident only, and neutralised almost from the beginning by the weakening dilatation which accompanies it. In an aneurism of the aorta, opening by a small orifice into the vessel, the deposit of fibrin, far from being an effort of nature to remedy the disease, is an accidental consequence of the stagnation of blood in it, and of the roughness of the wall. It does not occur in the equally dangerous fusiform and saccular aneurisms, and is due to the same process which in a vein not uncommonly leads to death. In the case of parasitic diseases there is no provision for the elimination or destruction of the cause of the disease; many of them increase and multiply indefinitely, and the only way Nature relieves herself is by the accidental discharge of those on the surface, with the epidermis constantly shed off, or by the death of those occupying internal organs.

Poisons coming from without which are easily diffusible, entering by the alimentary canal or lungs, or by inoculation, pass directly into the veins; but probably all that consist of not readily soluble particles enter indirectly through the lymphatic system, and get into the blood only after a comparatively longer period. Of this syphilis affords an illustration, and so also probably do all the contagious diseases. Those contagious particles which enter by the lungs do not seem to reach the air-cells, but become attached to the mucous surface, and pass into the lymphatics, and thence into the bronchial lymphatic glands. In cholera and enteric fever the contagium passing into the stomach and bowels is absorbed doubtless by the columnar epithelium, and passes, not into the vessels, but into the lymphatics. Occasionally, it may be, the contagium passes directly into the blood, and is more rapidly diffused.

The blood itself is an ever-changing fluid. It constantly tends to get rid of deleterious matters which have entered it, but we cannot expect it to get rid of matters accidentally introduced so rapidly as of those naturally entering it, as urea or bile. The circumstances determining removal seem to be the solubility and diffusibility, or elective affinities with certain organs, as lead tends to be deposited in the muscles of the arm and intestine. The germs of tubercle and carcinoma in the circulation manifest an elective affinity for certain organs. The same is the case in the various forms of contagious diseases. One poison affects one part, another another, and this whether recovery or death be the final issue. In many of these cases it cannot be contended that there is any special eliminative effort of nature to get rid of the matters acting injuriously on the system. It is certainly not so with lead; and if it be contended that in the diseases of limited duration the contagium escapes from the blood through the connective tissue to the cutaneous and mucous surfaces, it may be objected that Nature is clumsy for good, and powerful for evil; for, instead of neutralising the poison on the threshold, she lets it run riot in the system, and only allows it to escape after it has effected all the harm possible, and the power of imparting disease to others has been increased a millionfold. In some diseases, as tubercle, cancer, syphilis, hydrophobia, glanders, there is no attempt at elimination.

In conclusion, it may be admitted that poisonous matters of some kinds tend speedily to be discharged; when they have affinities for certain parts, they tend mainly to be deposited there, irrespective of good or evil, and subsequent morbid processes depend partly on position, structure, and functions of the organs in which the deposit has taken place, partly on the nature of the deposit, whether mechanical or vital, and in the latter case on whether it acts as a ferment and rapidly influences the whole system, or whether it takes root in the tissues and produces proliferation or a tumour.

LECTURE II.

The art of prescribing, though unquestionably very important, rather hinders than advances therapeutical knowledge. Such rules as those of Dr. Paris—"Pharmacologia"—are more adapted for those who believe that they understand the action of medicines in relation to processes of disease than for investigators. In proportion as we combine we deprive ourselves of the power of obtaining precise acquaintance with the individual drugs we employ. But the difficulties in ascertaining the effects of medicine on disease are almost insuperable, and not limited to those which arise from the art of prescribing. One of the greatest sources of error lies in the fact that all diseases tend to run a certain course, varied by constitutional peculiarities and the severity of the attack; and we are apt to ascribe the favourable result to our remedies, and the unfavourable course to the disease. In chronic illness slight variations are put down to the credit of medicines employed, of which they are often quite independent. The danger is increased when we fail to recognise accurately the nature of the disease we are called upon to treat. How often is a specific fever cut short by an emetic, which fever never was; the action of an hypertrophied heart reduced, when only functional disturbance was present. Again, various forms of hygienic treatment are usually combined with medical treatment, and the resulting improvement ascribed to the latter when it is really due to the former. But perhaps the greatest impediment of all is offered by the various theories of disease which spring up from time to time and influence both our judgment of the nature of diseases and our mode of action; such, for instance, as is exemplified in the bleeding, stimulating, and eliminating plans of treatment. Each theory received the credit of the recoveries that were certain to occur under, or in spite of, the corresponding plan of treatment, no attempt being made to ascertain the average duration of the disease, the percentage of deaths, or the frequency of secondary affections. Yet we find it easier to believe in change of type of disease than in change in our own opinions; and theories are invented to account for such a change, founded on imperfect knowledge, and never shown to be true in any large sense.

Functional diseases constitute a large proportion of the maladies with which we have to do. In a large number, the nervous system, and especially the vaso-motor portion, is involved; but how, and whether primarily or secondarily, is beyond our knowledge. We remain perfectly ignorant of the fundamental causes on which the phenomena depend, and of their intimate pathology. It is not to be wondered at, therefore, that the curative treatment of functional diseases should be for the most part empirical and unscientific; and, when scientific, all the science is bestowed on counteracting or relieving secondary phenomena or symptoms; and here, it must be admitted, we are far from being powerless for good. Yet on many we have no influence, and on many—as chorea—our curative power is illusory. The principles of treatment of diseases due to the action of poisons, and of excessive or deficient or improper nourishment, are better understood, but we often fail to bring them into successful operation from many causes. Of the class of diseases due to the retention within the system of matters originating in the waste of tissues, and destined normally to be removed by the excretory organs, the principles of treatment may be simple, but the means of carrying them out are by no means equally simple. It is often impossible to restore the organ to a healthy state. This is less important, however, in the case of the liver than in that of the kidney. In the latter, besides the usual measures, it is important to check as far as possible the formation of urea &c.; hence the diet should be carefully regulated, and not allowed to exceed the actual requirements of the system.

Mechanical diseases we can only hope to relieve or cure by the means which Nature herself employs, often in a blind manner, and productive of more harm than good. Our best chance of relief lies in moderating rather than stimulating her efforts—in relieving violent spasm by sedatives, rather than by increasing the muscular effort. The impaction of a calculus in the ureter or of a gall-stone in the bile-duct illustrates this. Nor is the case of the heart in valvular disease very different. The dilated and hypertrophied ventricle acts more powerfully, though with less effect, and soon runs into purposeless violence, palpitates, and acts irregularly. Our object must be, not to stimulate the heart, but to allay its irritability, and for this quiet of body and peace of mind are more efficient than any medicine. In justice to Nature, it must be admitted she sometimes makes a compromise with these mechanical diseases: the gall-stone becomes lodged in a cyst—the stricture may be partially destroyed by ulceration; but these are processes we can neither initiate nor aid. Aneurism, another of the mechanical diseases, can only be cured by the deposition of fibrin within the sac—a process which probably no medicine is capable of bringing about, except that which does so by promoting tranquillity of circulation.

Parasitic diseases affect different portions of the body, and necessarily need different kinds of treatment. Wherever we can reach them we have the power of destroying them, and it is very questionable whether their eradication is facilitated by any indirect treatment, tonic or other. It is equally doubtful whether the parasites which are out of our reach can be affected by the remedies which have been administered in some cases with alleged benefit. It is hardly more reasonable to expect iodide of potassium or kamela to influence echinococci than to endeavour to remove itch by a course of brimstone and treacle, or ringworm by diuretics.

In no subject has fashion had more influence than in the treatment of inflammation. The obvious differences between the process in different forms and organs is a justification for some of the differences in treatment. The measure of success which has attended the most different systems indicates that the essential course of the disease, its progress towards recovery, was independent of the specific measures employed, which probably effected nothing beyond a little delay or hastening of the progress. So much has this sceptical view found its way that a considerable number have adopted the expectant or "do-nothing" treatment, especially Dr. Hughes Bennett, of Edinburgh, and if statistics mean anything they mean that his success has been remarkable. During the last ten years, Dr. Bristowe has given up the special treatment of pneumonia, and patients have got as rapidly well, and have recovered in as large a proportion, as when special treatment was adopted; and during the last few years he has refrained from alcohol, except during the period of convalescence with equal success.

Acute rheumatism, like pneumonia, arises from exposure to cold, but differs in its less definite course. There is strong reason to believe that each local inflammation acts as the starting-point of fresh complications. Numerous systems of treating it have sprung up, and each has been attended with a fair amount of success. It is even more difficult than with pneumonia to judge of the influence of treatment. A specific remedy must be one that curtails its course, and prevents heart disease; but a little experience shows that no such remedy has yet been found. The value of statistics in settling the point at issue is doubtful. The tables of Sir Wm. Gull and Dr. Sutton have been rearranged by Dr. Fuller to prove that they are wrong. Dr. Bristowe's experience with regard to acute rheumatism is the same as with pneumonia. In many other inflammatory affections, in common catarrh, psoriasis, carbuncle, and herpes, for instance, it is doubtful if we can do more than in acute rheumatism or in pneumonia. Psoriasis is especially regarded as a curable disease, but its course is generally intermittent, and many reputed cures by arsenic &c. are probably due to the fact that the patient was put and kept under its influence until the normal time for the disappearance of the rash.

Yet there can be no doubt that we have it in our power to influence very materially the course of these and many other inflammatory affections. If we cannot cure, in the sense of stamping out the disease, we can at least improve general health, prevent exposure, and relieve symptoms or complications, and so by judicious exercise of art, give relief, hasten convalescence, and save life.

LECTURE III.

Effusions of various kinds—of blood-serum or of the products of secretion—fall naturally into one or another of the groups of diseases enumerated in the first lecture, but their treatment deserves special consideration. Its chief difficulty resides in the fact that their causes are, for the most part, in permanent operation, organic, and incurable. Organic disease of the kidneys, emphysema of the lungs, valvular disease of the heart, are conditions not only incurable but progressive, and permanent cure of the resulting dropsy would seem out of the question. Still many inconveniences and dangers may arise from the mere accumulation of dropsical fluid, and its removal, even temporary, is desirable by puncture or by action on the various emunctories by which fluids are usually removed from the system. Of these the lecturer has most faith in diaphoresis, least in diuretics; never having seen anasarca removed by diuretics alone. In no case of localised œdema do diuretics appear to have any effect, and yet if they are potent to relieve general dropsies they ought to be able to relieve local dropsies; if able to remove œdematous fluid from both legs, surely they should be able to remove it from one. That purgatives can remove much anasarcous fluid is beyond doubt. During the cholera epidemic of 1854 a man with general anasarca one morning called attention, with much satisfaction, to the disappearance of his dropsy; in a few hours he died of cholera. Diaphoresis the lecturer has used with great success, but he has as little confidence in medicinal diaphoretics as in diuretics. The hot-air bath, however, has yielded excellent results in dropsy from both renal and heart disease. But in these, as in so many other cases, health-producing hygienic conditions co-operate with the special treatment, and are concerned in the result.

Of dropsical effusions within cavities ascites is one of the most important. Here it is very doubtful whether diaphoretics, diuretics, or purgatives have any beneficial effect alone. If those measures will remove fluid from the peritoneum or the pericardium, they ought to be capable of removing it also from an ovarian cyst or a hydrocele. They probably do good, in cases where benefit follows their employment, by improving the general health. Uncontrollable diarrhœa is a not uncommon attendant upon ascites, and is, for the most part, of bad augury. But in most cases of ascites, improvement of the general health by tonics, iron and quinine, yields good results. Ten cases treated thus were communicated by the lecturer to the Clinical Society, in nine of which the dropsical effusion was lost after tapping. In cases of general dropsy also tonic treatment is of great benefit.

Neoplasms form a large proportion of the diseases we are called upon to treat. Some disappear spontaneously; others are influenced by medical treatment. Most innocent tumours are quite beyond reach of remedies taken into the system. Iodine long enjoyed a reputation for the cure of goitre, but when it was discovered to cure goitre, it was discovered equally to cure the male of his testicles, the female of her breasts. Long experience has shown that the belief that it could influence the latter is altogether illusory, and it may be asked whether anyone believes that goitrous necks are less common in Switzerland than before iodine was discovered to be a specific. The lecturer has seen no case of goitre in which its use was followed by any satisfactory evidence of amelioration.

Passing over the malignant growths, we come to tubercle, in some respects a malignant disease, but differing from the diseases allied to carcinoma in the remarkable proneness of its growths to undergo degeneration and become inert, and in the occasional arrest of the disease. Drugs, probably, have no direct influence upon it, but there seems no reason to doubt the effect of cod-liver oil and tonics, which improve the patient's general health, and so favour the tendency of the disease to die out.

Syphilis forms an important link between tumours and the exanthemata, but differs from both in its inherited communicability. No treatment in the primary stage will prevent further symptoms. Mercury and iodine seem to have an almost specific influence upon it, but often with (and sometimes even before) the discontinuance of the medicines the symptoms recur. On the assumption of the nature of the disease and its diffusion from fresh centres, given in a previous lecture, it is easy to believe how, after the most thorough apparent cure, the germs of the malady may be left behind in some remote corner, ready to prove the starting-point of a fresh outbreak. The transitory nature of the influence of the most powerful remedies upon it resembles the action of some other specifics, as quinine and arsenic in ague, colchicum in gout, which seem to have little or no power to prevent a recurrence of the maladies over the individual attacks of which they exercise so marked an influence.

For the treatment of the specific infectious fevers innumerable methods have been recommended. Of late years the conviction has become more and more prevalent that we are unable by our remedies to cut any of them short. We can only sustain the patient, and prevent or relieve unfavourable contingencies.

All these diseases are obviously preventable. Few, if any, arise *de novo*; and our power of preventing their spread is increased by a knowledge of their actual history and the sources of their contagion. Such, for instance, is the case with syphilis; and we cannot but lament the educated bigotry which is opposing, with so much earnestness and success, the efforts of sanitary authorities to check a disease which is not only a source of the direst misery to those who contract it through their own misdeeds, but which visits the sins of the fathers upon the children to the third and fourth generation. When the origin of cholera was unknown, no efficient mode of staying its spread could be proposed. Now that we know that the contagium passes almost entirely by the evacuations, and that contaminated water or food communicates it, the requisite measures become apparent. But although we are powerless to cut these diseases short, it is probable that by careful attention during their earliest stages we may render the attack milder; and throughout its course we may often diminish its severity by attention to hygienic measures, and may do much to relieve functional disturbances, whether an essential part of the disease or accidental complications. Again, in most there is a tumultuous development of protoplasm, attended with the production of much heat and rapid destruction of the albuminous tissues. A temperature much exceeding the normal is certainly injurious, and increases the severity and danger of the disease from which it results; and its reduction by the tepid or cold bath is often of great advantage. The retention of effete matters in the blood cannot but be detrimental, and benefit may result from stimulating the sluggish excretory organs to increased activity. It has been assumed, partly from the tendency of the period of greatest severity of the attack to be attended by some discharge termed "critical," partly from the fact of the occurrence of a rash on the skin or mucous membrane in which the contagium thickly resides, and from the fact that

many poisons pass out by certain paths, that there is a natural elimination of poisonous material, and hence that a cure may be promoted by the encouragement of that elimination. The theory of elimination is an old one, which has obtained special interest from Dr. Johnson's views on cholera. It must be admitted that if cholera depend on a poisonous something which multiplies in the blood, and thus causes the characteristic symptoms of the disease, and if recovery depend on the separation of this at the mucous surface of the bowels, it would be desirable to adopt measures to promote such separation, and undesirable to do anything calculated to arrest it. It may, however, be doubted whether this chain of hypotheses is sound. The modes in which the organised particles constituting contagium become introduced into the blood, and their numbers augmented and kept up in it, have been already considered, and it has been pointed out that their residence in it must be of short duration, since they cannot be detected in the circulating blood by the microscope, and since the blood is rarely capable of inoculating the disease upon healthy persons. This renders it most improbable that the characteristic symptoms are due to the presence of the poison in the blood. In carcinoma and syphilis it is certain that so long as the germs are retained within the vessels they cause no symptoms. It is not denied that the blood becomes much affected in many of these diseases; but it is contended that these changes are not, except in slight degree, specific, but are due to the rapid destructive processes going on in the tissues, and the insufficient removal of their products. It seems clear that the characteristic symptoms of fevers do not arise so long as the specific poisons are merely circulating in the blood, and that poisonous or foreign matters in the circulation tend rapidly to leave it. Whether their escape into and operation on the solid tissues is beneficial, or injurious, or neither, depends on other circumstances. It is so with inorganic poisons, with substances given as medicines, and with the germs of syphilis and tubercle. Is it not so with the infectious diseases, measles, small-pox, &c.? All that renders these diseases characteristic and dangerous to the person himself or to others, is in intimate relation, not with the processes within the bloodvessels, but with those occurring externally to them, and dependent on the escape of the contagium from the vessels. In small-pox the patient receives the poison, and after a time there occur the peculiar symptoms and the rash. On the eliminative theory it is assumed that the poison discharged from the blood produces the cutaneous inflammation as a step towards its final discharge from the body. Obviously this is not the fact. No doubt the poison of small-pox escapes and produces the inflammation of the skin; but it is at least equally certain that the skin thus inoculated becomes a most active manufactory of the virulent poison. It can hardly be argued that all the virus of each pustule is from the blood. Clear evidence on this subject is afforded by the phenomena of inoculation. The primary pustule goes through the same stages as the others, no doubt from the direct multiplication of the poison inoculated, and it follows almost as a matter of course that the other pustules are due to a similar local multiplication of the poison. If this be true of small-pox, surely the same is true also of scarlet fever, measles, and probably also of whooping-cough and mumps.

Are not all these considerations applicable with equal force to the explanation of the phenomena of cholera? A specific poison enters the blood which has a marked tendency to become eliminated by the alimentary mucous surface. There is no proof that this acts injuriously while retained, and, judging mainly by analogy, it may be assumed that it produces its characteristic effects when it escapes from the blood and acts on the solid tissues. That it undergoes development out of the blood is established by experiments on animals, and by the experience that cholera evacuations become more and more infective up to the time at which, after a few days, they are rendered inert by the advance of putrefactive changes.

A further argument that the contagious particles multiply in the blood or organs, and then sow themselves and germinate in the tissues outside the vessels, rather than are merely eliminated thus, is shown by the fact that the foci of contagion never reinfect the individual. The inoculated pustule of small-pox throws out effective contagious particles into the system. Similar pustules formed at a later date have no such ulterior influence. Absorption by lymphatics is a passive and unselective act, and so no doubt absorption takes place from the secondary pustules as from the first; but whatever is thus absorbed remains inoperative. It may be said that this is connected with the protective influence which follows an attack, but this consideration does not explain the phenomenon. The essential feature is that the duration of the disease is limited—a limitation not determined by the tendency of the vastly multiplied poison to pass off by the emunctories, but due to some occult influence exerted by its development which renders it ineffective for further aggravation or maintenance. The cessation of the disease does not depend on elimination, but on the supervention of a condition which renders the poison inoperative.

These conclusions are incompatible with the value of the eliminative treatment of contagious diseases, and the results of experiment are scarcely favourable to it. Where it can be best applied—as in the exanthemata, which develop chiefly on the skin—measures to promote it would tend rather to increase the rash; and every physician, as a matter of course, treats the patient on the opposite principle, and discourages elimination. Does anyone think of eliminating diphtheria by encouraging the development of false membrane? Yet, if the eliminative theory be true, this should be the proper mode of treatment. There are no sufficient grounds for regarding the discharges of cholera as more eliminative than the eruption of small-pox or the membrane of diphtheria: as the latter is the chief source of danger, and its development is to be moderated as much as possible, so the alvine discharges are detrimental, and to be restrained. The occurrence of rapidly fatal cases of cholera without much evacuation neither proves that such discharges are not a source of danger nor that they are eliminative. Such cases bear the same relation to ordinary cases as do those terrible cases of small-pox, measles, and scarlet fever in which the patient is struck down by the intensity of the attack, to the more common forms. In recorded experience there seems to the lecturer to be little evidence in favour of the purgative plan of treatment, which is so opposed to these theoretical considerations. He doubts whether, in the premonitory stage, it is possible to prevent the subsequent full development of the attack, or materially influence its progress, by either purgatives or astringents; and whether, in the later stage, any benefit can be derived from opening medicine to remove poisonous matter from the bowels—a proceeding which may be compared to the removal of the scabs in variola and the squama in scarlet fever. In the premonitory stage, the poison is in the system, and is not in the bowel, and a purgative is no more likely to expel it than is a hot bath to remove the poison of variola through the skin. In the second stage absorption is impossible, and it is obviously useless to give medicines which only operate after absorption. It is as reasonable to hope to check or hasten the discharge by remedies acting locally, as to hasten or retard the downward rush of a mountain torrent by throwing astringent or purgative medicine into it.

Though a large number of diseases are incurable, the skilful physician has numerous opportunities of exercising his skill for the patient's benefit by guarding against and averting complications, and treating as they arise those symptoms which distress the patient or endanger life. He may often be able to cure the patient, though he cannot cure the disease. Further, in many diseases, especially in functional ones, it is absolutely within our competence to cure the disease. In all, regulation of the emunctories, strengthening of the nervous system, improvement of digestion by tonic medicines and regulated food, are of the highest importance. By such means patients are often saved from death during the severity of disease, and brought into safe convalescence.

In conclusion, Dr. Bristowe observed that he feared that much that he had said was little likely to command acquiescence. It was easier to pull down than to build up, but he trusted that he had used no expressions which might have seemed disrespectful or contemptuous towards the opinions of others. He certainly entertained none towards those which he had most freely criticised. Those who held them were as entitled to do so as he was to hold his, and he had no claim to be the judge between himself and them.

ABSTRACT
OF THE

Lumleian Lectures
ON

DISEASES OF THE MUSCULAR WALLS OF THE HEART.

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LECTURE I.

IN the attention which has been given to diseases of the valves of the heart, the affections of its walls have too much been lost sight of. True, their importance has not escaped the attention of the principal writers on the subject. Laennec, Stokes, Gairdner, Chambers, Peacock, have all referred to the importance of studying the condition of the walls of the heart; but such prominence is still given to the subject of valvular disease that many persons have come to regard the term as synonymous with all heart disease, while there are not a few who regard dilatation and hypertrophy as mere complications of diseases of the valves. No doubt disease of the valves is a very serious element in the production of heart disease; it more or less inevitably leads to dilatation, or to dilated hypertrophy. But many other causes are equally efficient in producing those conditions. The real value of clinical study of the valvular diseases of the heart is that a knowledge of their existence leads us to a recognition of the immediate cause of the disease, which may be present in the heart's walls, and also that we may be able to measure the progress of the one by the nature and progress of the other.

Clinical study of the diseases of the walls of the heart teaches us that (1) the really serious effects of heart disease result from hypertrophy, or from dilatation, or from a combination of the two; (2) valvular diseases may exist up to the close of a long life without rendering the subject of them conscious of their presence; (3) it is possible to refer to cases in which, valve disease having existed without causing any inconvenience, something occurs which damages the condition of the muscular walls, and serious disturbance is the result; (4) there are cases in which some additional mischief occurs to valve disease already existing, and this mischief is remedied by the supervention of further compensatory hypertrophy; (5) the converse of the last class is seen in cases of valve disease in which the heart walls fail and the disease progresses; (6) cases occur in which valvular disease—i.e., incompetency—is caused by dilatation of the heart. These propositions show the primary importance which belongs to the study of diseases of the walls of the heart. As these walls are strong and efficient, as they are weak, dilated, and inefficient, so will be the phenomena of disease with which we have to deal.

Enlargement of the heart is the most important of its pathological states, both from the frequency of its occurrence, and from the marked influence which it has over many other morbid conditions of the body. It is rarely the result of a single process, being usually due to a combination of hypertrophy of the principal elements which compose the cardiac walls, with dilatation of its cavities, the result of internal pressure.

The subject of hypertrophy of the heart seems to have been first noticed by Nicholas Massa, in 1534, who speaks of a heart "greatly enlarged." Our own Harvey, in 1601, described a heart very much enlarged occurring in a man "as the result of choler." Mayow, in 1681, describes a case in which, the left auriculo-ventricular orifice being obstructed, hypertrophy of both ventricles had occurred; and it would be difficult to give a truer or clearer description of our knowledge on the subject at the present day than that contained in his account. Vesalius, Senac, Corvisart, and Bertin, all described hypertrophy more or less accurately, but they gave it a subordinate place, regarding dilatation as the more important disease. Bertin first described hypertrophy fully, separating it from dilatation, and he formed a classification which is almost that which we use at the present day.

Enlargement of the walls of the heart may depend, first, on an increase in the muscular fibres; secondly, on an increase in the connective tissue; and, thirdly, on an increase of fat.

The first form, *simple muscular hypertrophy*, is familiar enough in its character and appearances. The determination of the exact nature of the muscular change, whether by increased size or increased number of the fibres, or by both, is attended with so many difficulties that the question is still unsettled.

The second form, *connective tissue hypertrophy*, is one which has not yet received distinct and definite recognition. The disease first came under Dr. Quain's notice nearly twenty years ago, in a case recorded in the Pathological Transactions, vol. I. A similar change has been briefly alluded to by Corvisart, Laennec, Dr. Williams, Rokitansky, Sir W. Jenner, and Dr. Ormerod. Under the microscope a heart affected with this disease presents not only the usually limited amount of intermuscular fibrillar tissue and connective tissue cells, but a decided hyperplasia of this in the shape of connective tissue in all stages of development, from the globular to the spindle-shaped cell, and from this again to the bundle of fibrillæ. The muscular fibres are seen to be surrounded by this connective tissue, and more or less compressed by it. In many of the fibres granular and slightly fatty degeneration may be observed. In other parts of the heart the muscular fibres may be normal in appearance. The thickness of the walls is increased, as in simple hypertrophy, but their density and consistence is strikingly increased to a firm, tough, leathery character. When divided the cut edges do not collapse, but remain stiffly prominent. In colour, such a heart may vary from pale buff to deep purple, according to the amount of connective tissue and of blood present. But the change often occurs with less marked characters, and the hearts thus affected may not differ greatly from those hypertrophied by simple addition to the muscular fibres. This is doubtless the reason why the disease has been so often overlooked. The origin of this change is unquestionably to be sought for in a chronic interstitial inflammation or hyperplasia.

The third form, *hypertrophy of fat*, has usually been confounded with fatty degeneration. Where this change is moderate in amount, simple striæ of yellow tissue may be observed to lie amongst the fibres, and small masses of fat may appear beneath the endocardium. In the more extreme cases the muscular fibres may be almost concealed, and the columnæ carneæ may seem to arise from a mass of fat, as they are described to do by Laennec and Bizot. Under the microscope the fat is contained in cells as in other parts of the body. It is most abundant towards the outer surface. There, few muscular fibres can be seen, and the wide intervals between them are occupied by the fat-cells. Proceeding inwards, the fibres are more evident and the fat-cells fewer; and, finally, beneath the endocardium we have only a few cells lying here and there between the fibres. Even though overwhelmed with fat the fibres may still retain their organisation; but, in all cases, their course and direction is more or less modified and distorted.

Dilatation of the heart. Its character and ordinary mode of origin are well known. It occurs in especial relation to degenerative processes in the cardiac wall, and particularly when occurring in the recently developed muscular fibre of commencing hypertrophy. Both processes continuing, we get those enormous examples of dilated hypertrophy sometimes seen, in some of which the heart reached the weight of 46 oz.

The *causes* of enlargement of the heart may be classified thus:—(1) Agencies acting through the nervous system; (2) agencies acting mechanically; (3) agencies originating in disordered conditions of its nutritive functions.

Concerning the first of these causes Corvisart called attention to the increased frequency with which organic affections of the heart were met with during the French Revolution. In the overstrained excitement of our own more peaceful age we may recognise a cause equally efficient. Statistics furnished by Dr. Farr clearly show two things; first, as an absolute fact, that during the last twenty years

the total of deaths of males at all ages from heart disease have been more than doubled. Corrected for increase of population, the tables show that per 1000 living between 1851 and 1855, ·725 died from this cause, as compared with 1·085 from 1866 to 1870. Secondly, that during the years 1851–1870 the percentage of deaths from heart disease has remained quite unchanged in males under twenty, showing that the difference cannot be due to improved diagnosis of the disease, whereas the percentage in each succeeding period of twenty-five years has risen half as much again. Nevertheless, the same statistics show there is almost no rise in the percentage of deaths of females from cardiac disease during the twenty-five years of life from twenty to forty-five.

The mechanical causes of hypertrophy are such as interfere with the free circulation of the blood. Severe muscular exertion, often repeated, is a frequent cause. The influence on the heart is, for the time, very distressing, and it may lead to permanent injury. Athletic sports in excess often do harm in the same way. The cardiac hypertrophy in Master Magrath was more likely the result than the cause of his sustained muscular efforts. No doubt to the influence of physical labour is due the far greater liability of men than women to cardiac hypertrophy. According to Dr. Vanderbyl, out of 40 cases 34 were in males, with an average weight of 22¼ oz., whilst only 6 were in females, with an average weight of 17½ oz. A more frequently recognised class of mechanical causes consists of those occurring in the direct course of the circulation, in the heart itself, or in the vessels—e.g., contraction of the orifices of the heart, atheroma in the great vessels, constriction of the aorta, the distal obstruction in Bright's disease, and pregnancy. The influence of obstruction in the minute vessels in causing hypertrophy was pointed out by Mr. James, of Exeter, so far back as 1817, and afterwards more fully enunciated by Dr. Bright in his paper on Albuminuria, published in 1836. Both he, and subsequently Dr. Snow, referred the increased action to a difficulty in sending the altered blood through the minute parts of the circulation; and Dr. Johnson has shown how this difficulty is produced by the increased contraction of the muscular walls of the small arteries, and subsequent hypertrophy. Traube imagined that the obstruction in the kidneys would explain the phenomenon.

The influence of pregnancy in causing hypertrophy has attracted less attention than it deserves. In 1826 Lacher announced, as the result of an examination of 130 healthy women who died in childbirth, that the heart was enlarged in pregnancy, the hypertrophy being confined to the left ventricle, whose walls were increased from a quarter to a third. The occurrence of the hypertrophy has since been amply confirmed. It is due, no doubt, to the necessity for an increased supply of blood to the womb, as well as to the mechanical resistance offered by the pressure of the gravid uterus upon the great vessels of the abdomen. Some consider that the albuminuria which occurs in pregnancy contributes in some measure to the cardiac enlargement, while most think with Traube that the latter exercises a causative influence upon the albuminuria.

Enlargement of the heart from the third group of causes—disordered conditions of the nutritive functions—is more frequently of a passive and degenerative kind. In chlorosis and anæmia the heart labours rapidly but ineffectually to send its diluted contents for the nourishment, imperfect though it be, of the system. In such cases we see dilatation of the degenerated walls. In those again who live well and take little exercise, the heart becomes large, flabby, and infiltrated with fat. In Bright's disease some of the hypertrophy may be due to excited action caused immediately by the blood-state.

Of nutritive influences acting locally, one of the most interesting is the influence of pericarditis and adhesion. There has been much discussion concerning the state of the heart under these circumstances, some asserting that it is enlarged, others that it is diminished in size. As a general rule it is enlarged, but the enlargement is usually due to hypertrophy of the connective tissue. Such was the case in a heart described by Dr. Wilks in the "Pathological Transactions," vol. viii., in which one-half of the true muscular substance was replaced by fibrous tissue. Where, in these cases, the size is diminished, it is probably due to infiltration by a denser fibroid tissue—a cirrhotic process analogous to cirrhosis elsewhere.

Passing over the well-known causes of dilatation, there occur, lastly, cases of cardiac enlargement which cannot be referred to any one cause. Cases have been recorded by several observers. In some the dimensions of the heart have been enormous. It seems probable that such enlargement, without evident cause, may be due to fibroid infiltration. This view has been confirmed by an examination which has been made of one of these large hearts, weighing 40½ oz., which has been for the last thirty years in the museum of St. George's Hospital. Under the microscope it was found to depend partly on hypertrophy of the muscular fibre, but also in great measure on a large increase in the amount of connective tissue.

CONTRIBUTIONS
ON THE
PHYSIOLOGY & THERAPEUTICS OF FOOD.

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No. VII.
ELIMINATION OF UREA AND MUSCULAR WORK.

IN the *New York Medical Journal* for October, 1870, Dr. Austin Flint, jun., records the result of the examination of the urine secreted during the performance of an extraordinary amount of muscular work, under the form of walking, within a limited time. A Mr. Weston, aged thirty-two, of medium height, and weighing ordinarily 122 lb. without his clothes, celebrated as a pedestrian of the United States, undertook to perform the astonishing feat of walking one hundred miles in twenty-two consecutive hours. The feat, it appears, was accomplished within the time—namely, in twenty-one hours and thirty-nine minutes. The food consumed during the period was taken in small quantities at short intervals, and consisted of between one and two bottles of beef essence, two bottles of oatmeal gruel, and from sixteen to twenty raw eggs with water. He drank a little lemonade, and took water very frequently, but only in quantity sufficient to rinse his mouth. While walking the last ten miles, he took, it is further stated, two or three mouthfuls of champagne, amounting to about three fluid ounces; and about two and a half fluid ounces of brandy, in ten-drop doses. The head and face were sponged freely at short intervals, and the food and drink were taken mainly on the walk, which was conducted within a covered enclosure. The urine passed during and at the completion of the walk measured seventy-three and a half fluid ounces, and presented the specific gravity of 1011. According to Dr. Flint's analysis, it contained 424¼ grains of urea.

Now, 500 grains form about the average daily quantity of urea discharged under an ordinary mixed diet; and, as the diet during the performance of the pedestrian feat was rich, as the account shows it to have been, in nitrogenous matters, the quantity of urea, apart from any other consideration, was even less than might have been expected. And yet, on the strength of a comparison with another examination of the urine conducted three months later, in the absence of subjection to muscular exertion, when only 191 grains of urea were given as discharged, Dr. Flint brings forward the observation as affording evidence that muscular exercise notably increases the elimination of urea.

To take a solitary result of so exceptional a kind as this latter as a criterion or ground of comparison, and reason from it as Dr. Flint has done, is surely to violate all rules of sound induction; and it is to be hoped that we shall not find the observation quoted by writers as bearing out what Dr. Flint has contended for.

During November, 1870, Mr. Weston undertook another pedestrian feat, and this time a very elaborate examination was made of the ingesta and egesta and of various conditions of the body by Dr. Flint and a staff of associates. The results are recorded in detail in the *New York Medical Journal* for June, 1871. The feat proposed was to walk 400 miles in 5 consecutive days, and upon one of the days 112 miles were to be walked in 24 consecutive hours. Mr.

Weston commenced the undertaking on the 21st of November. The examination of the ingesta, egesta, &c., had been conducted for 5 days before; it was also carried on during the 5 days of the walk, and continued for 5 days afterwards. Thus the results for three periods—before, during, and after the walk—were obtained. The subjoined tabular representation will give a summary view of the leading results noted. The walk was undertaken over a measured track marked out in the form of a parallelogram, within a large covered space—namely, the Empire Skating Rink in New York. It appears that Mr. Weston failed this time to accomplish the feat he had attempted; the distance walked during the 5 days amounting to 317½ miles, and the greatest distance on any one day to 92 miles.

Dr. Flint's observations on the effects of the five-day pedestrian feat performed by Mr. Weston.

	Weight of body (nude).	Temperature.	Pulse.	Miles walked.	Nitrogen in ingesta.	Nitrogen in egesta.	Excess or deficiency in nitrogen egested.
Before the walk.	lb.	Fahr.			Grains.	Grains.	Grains.
First day	120·5	99·7°	75	15	361·22	323·26	− 37·96
Second	121·25	98·4	73	5	288·35	301·18	+ 12·83
Third	120·	98·0	71	5	272·27	330·36	+ 58·09
Fourth	118·5	99·1	78	15	335·01	300·57	− 34·44
Fifth	119·2	99·5	93	1	440·43	320·06	− 120·37
During the walk.							
First day	116·5	95·3	98	80	151·55	357·10	+ 205·53
Second	116·25	94·8	93	48	265·92	370·64	+ 104·72
Third	115·	96·6	109	92	228·61	397·58	+ 168·97
Fourth	114·	96·6	68	57	144·70	348·53	+ 203·83
Fifth	115·75	97·9	80	40·5	383·04	332·77	− 50·27
After the walk.							
First day	118·	98·6	76	2	385·65	295·70	− 89·95
Second	120·25	98·4	73	2	499·10	358·81	− 140·29
Third	120·25	99·3	70	2	394·83	409·87	+ 15·04
Fourth	123·5	98·8	78	2	641·71	382·89	− 258·82
Fifth	120·75	97·5	76	3	283·35	418·49	+ 135·14

Dr. Flint still holds to his former opinion, and looks upon the above results as showing, to use his own words, that "excessive and prolonged muscular exertion increases enormously the excretion of nitrogen; and that the excess of nitrogen discharged is due to an increased disassimilation of the muscular substance."

Let us accept Dr. Flint's estimates of the ingoing and outgoing nitrogen. It is true, during the first four days of the walking period the exit of nitrogen was in considerable excess of the entrance; but why should this be referred specially and exclusively to muscular disintegration? There was during these four days a progressive decline in the weight of the body, the loss reaching a little over 5 lb. From the account given considerably less solid food was taken then than before and after. There existed a state of marked disturbance of the bodily functions, as shown by the depression of temperature and elevation of pulse; but little sleep was obtained; and on the third day, when an attempt was made to walk the 112 miles in twenty-four consecutive hours, drowsiness, it is stated, prevailed to such an extent that it was found impossible to make the necessary time to accomplish what had been intended. On the fourth day Mr. Weston actually broke down for a time altogether, becoming dizzy, staggering, and at last failing to be able to see sufficiently to turn the corners of the track.

Now, apart from the fact that a marked deviation from the physiological state existed when the results upon which the conclusions are based were drawn, is there anything in the results to show that in reality we have more to deal with than simply a consumption of nitrogenous material within the system beyond the supply for the time from without? Taking the figures throughout, there is not much more to be seen than a difference occasioned by a falling off in the amount of nitrogen ingested during the first four days of the walk; and it is well known that when the ingesta do not furnish what is wanted for meeting the expenditure going on (as during inanition), the resources of the body are drawn upon, and the nitrogenous matter existing in the various parts—both solids and fluids—wastes or yields itself as well as the rest. On the fifth day, after a prolonged sleep, which appears to have restored the flagging powers, the previous relation was reversed. The food ingested afforded more than enough to meet the requirements. There was a gain of 1¼ lb. in body-weight, and, according to the figures, the nitrogen discharged fell short by 50·27 grains of that which entered, notwithstanding a walk of forty miles and a half was performed.

The distance walked during the five days amounted to 317½ miles; and the excess of nitrogen eliminated during the time over that ingested appears to have been 633 grains. Presuming, for sake of argument, this to have represented the nitrogen of muscle disintegrated in the accomplishment of the work performed, we have before us the data for ascertaining how far the force producible in this way would correspond with the expenditure that must have occurred.

According to Mulder's analysis, albuminous matter contains 15·5 per cent. of nitrogen. Reckoning from this proportion, 633 grains of nitrogen will represent 4083 grains of dry albumen. Now, the force producible from the oxidation of albuminous matter has been experimentally ascertained by Frankland; and, as it occurs within the body, the oxidation of 4083 grains of dry albumen would give rise to the evolution of an amount of power equal to lifting 1540 tons one foot high.

Here we have one side of the question—the amount of work obtainable from the nitrogenous matter presumed to have undergone disintegration as muscular tissue; and so far the information in our possession may be regarded as sufficiently authentic to enable us to frame a reliable conclusion. As regards the work accomplished, we may assume, with Professor Haughton, that the force expended in walking or progressing on level ground is equal to that required to lift one-twentieth of the weight of the body through the distance traversed. The distance walked amounted to 317½ miles, and if we take the weight of the body and clothing at, say, 120 lb., this will give the performance of an amount of work equal to lifting 4490 tons one foot high, or about two-thirds more work than the oxidation of the nitrogenous matter representing the 633 grs. of nitrogen could accomplish. And, in this calculation, only the external work has been taken into consideration. There is, in reality, also a considerable amount of internal work constantly being performed—viz., that employed in keeping up the circulation, in respiration, and various other essential actions of life.

I have entered thus minutely into the question of the elimination of nitrogen in relation to muscular work because it bears in so forcible and direct a manner upon the question immediately before us—viz., the uses to which the nitrogenous alimentary principles are applied in the system. Briefly represented, the position of the matter may be said to be this:—

Many years ago it was asserted by Liebig that muscular action involved the destruction of muscular tissue. The plausibility of the doctrine, and the readiness with which the views of its author were then received, must be considered as having led to its being at once generally accepted as though it formed a scientific truth, although in reality only constituting a speculative proposition unsupported by anything of the nature of proof. It was further argued that, if muscular action involved the destruction of muscular tissue, the excretion of the nitrogenous product of destruction—urea—ought to be in proportion to the amount of muscular work performed. This seemed to follow as a necessary sequence, and the one being accepted,

the other was taken for granted also. Thus, notwithstanding the absence of anything in the shape of proof, we find physiologists writing and reasoning as if the doctrine had been actually proven.

If the theory of Liebig were true, we should have to look upon nitrogenous alimentary matter as forming, through the medium of muscular tissue, the source, and the only source, of muscular power. The renewal of muscular tissue for subsequent oxidation in its turn, and evolution of muscular force, would thus constitute one of the functions of nitrogenous alimentary matter, and on its supply would, accordingly, depend our capacity for the performance of muscular work.

It is only lately that the doctrine has been submitted to the test of experiment; with what result the foregoing account of the researches of various observers has shown. Even Liebig* has now come to assert that muscular action is not attended by the production of urea. He admits that the question as to the source of muscular power has been complicated by an inference which has proved erroneous, and for which he acknowledges himself as responsible—the inference, namely, that muscular work is represented by the metamorphosis of muscular tissue and the formation of urea as a final product. While admitting this much, however, Liebig still looks to changes in the nitrogenous constituents of muscle as the source of muscular power. He assumes the presence in muscle of nitrogenous substances in a much higher state of tension than syntonine and albumen; and to these he refers the performance of muscular work taking shelter under the proposition that it is due to the liberation of the tension thus presumed to have been accumulated in them during their formation.

REMARKS ON PRE-SYSTOLIC CARDIAC MURMUR.

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(*Concluded from page* 355.)

THE case which has been already given seems to carry us one step in advance in the attempt to explain the attendant phenomena. When the action of the heart was reduced to forty strokes in the minute, I was able to detect a soft murmur beginning after the second sound (post-diastolic) and terminating just before the harsh murmur began, which ran up to, and finished with, the first sound (pre-systolic). Taken in conjunction with what is known of the muscular movements of the heart, we are able to say positively that the first of these coincided with the tension of the auricular fibres and the relaxation of the ventricle, and was therefore produced by the onward current of the blood into the ventricle; and it seems equally clear that the second coincided with the tension of the ventricular fibres which precedes their shortening, and, consequently, must have resulted from blood flowing out of the ventricle, although the first sound had not yet been heard. The position of both murmurs, with reference to the apex-beat, proves clearly that the mitral valve was the seat of their production in each case. Still a great difficulty remains to be surmounted, in the fact that the pre-systolic murmur is arrested long before the ventricle has emptied itself of blood, and is not continued, as mitral regurgitant murmurs usually are, to the end of the systole. The reply must be purely hypothetical, but is closely related to the pathology of the valve in cases of pre-systolic murmur. Indeed, the idea first occurred to me in consequence of a remark made by the curator of our Pathological Museum, Dr. Whipham, when we were discussing the possible causation of pre-systolic murmur some time prior to the occurrence of the case related.

If we contrast the state of the valve in the ordinary systolic mitral with that in the pre-systolic murmur, we find that in the one the valves are quite free to close, the edges being roughened by deposit upon, or outgrowth from, their surface; while in the other the valve is transformed into a ring, prolonged into a funnel-shape, with a thick inflexible margin, the two flaps being more or less adherent to each other. When the blood is forced towards the aperture in the systole of the ventricle, the flaps fall together almost as in health in the former of these conditions; and just in proportion to their want of adaptation does it happen either that the first sound is itself modified, or that the systolic murmur begins earlier or later, while the contraction is slighter or more decided, the force called into play less or more powerful. The greater the want of adaptation the earlier does the valve yield, the less is the force required to overcome its resistance. In the latter form of disease the conditions are completely altered. The thickened rim cannot close in the ordinary way, it stands almost permanently open, and the first effect of ventricular tension is to drive blood through the valve, not to close it. But, as contraction goes on, the blood presses on the sides of the funnel, and impels them against each other; and thus the click of the valves is delayed, because not the edges but the sides have met—not the earlier tension but the later contraction of the ventricle has closed them. As soon as they meet they must more or less arrest the backward current, and we have thus the explanation of the circumstance that the murmur runs up to, and terminates in, the first sound. In other words, the blood is driven through the patulous valve by the earlier tension of the ventricle, but is arrested by its further contraction, when the sides of the valve strike against each other and form the only part of the first sound which reaches the ear, everything else being obscured by the noise of the murmur. This, too, explains why the interval before the first sound is longer than usual, because the closure of the valve has been delayed, and the first sound has been thus far postponed. The noise of the murmur is so great that it is extremely difficult to make out whether it is in all cases followed by a mitral systolic murmur. That it is so in many instances is acknowledged by those who have most studied the subject; and if cases occur in which it is certain that no murmur follows after the valve has closed, they must be those in which the funnel is somewhat elongated and the sides come into close adaptation under the pressure of the ventricular systole. This is probably the correct explanation of the continuous murmur referred to by Dr. Balfour, which he assumes to be caused by blood flowing in opposite directions, because its first part is rough and harsh, the second soft and blowing. While the hard ring stands wide open, the blood is driven forcibly through it, and perhaps right through the contracted auricle, with a loud noise, as its current mingles with that coming from the lungs; presently the sides of the valve come together with a click, and the incompetence of the mitral is reduced to a minimum; only a small leakage takes place, and this minute quantity of blood, no longer meeting an opposing current, which has been already brought to a stand-still, produces only a very slight murmur. Hence the first part of the murmur is harsh and loud, the second slight and soft, with the click of the valve-flaps as the only representative of the first sound of the heart interposed between them.

The absence in such cases of an obstructive murmur such as might indicate the onward flow of the blood, if this be a murmur of regurgitation, is just what *a priori* might have been anticipated, and is what we constantly observe in other forms of mitral regurgitation. The experience of all observers of cardiac disease may be safely appealed to whether it has not often struck them with surprise that a degree of roughness of the mitral valve almost unknown at the aortic aperture had led to no obstructive murmur at the apex, when it would have necessarily produced one at the base of the heart. If my memory serves me right, a musical murmur dependent on a long fibrinous coagulum is, at the apex, always systolic—regurgitant, not obstructive. The double murmur at the apex is certainly a rarity at the bedside. Such facts, taken in conjunction with the normal relations of the auricle, suggest the extreme improbability of any loud and rough murmur being produced by its contraction. Its power to overcome any obstacle is so small that, when called into play, the natural, the necessary result of obstruction at the auriculo-ventricular aperture must be that the blood is driven back on the lungs, and that pulmonary congestion and hæmoptysis should follow. This was the

* Proceedings of the Royal Bavarian Academy of Sciences, 1869; Pharmaceutical Journal, 1870.

result in the case of J. G. P——, and is constantly referred to by writers on the subject.

The explanation of the phenomena usually given is, that the blood accumulates behind the obstruction, and, incidentally, the action of the auricle is supposed to be delayed, in order to account for the length of the interval between the second and first sounds of the heart. It may be observed, in passing, that an obstructive aortic murmur does not give rise to any similar sequence; but much stress cannot be laid on this argument, because the circumstances are somewhat different, the integrity of the mitral valve in such a case saving the lungs from being very materially damaged, however much the current may be obstructed through the aorta. Such considerations only bring us back to that on which perhaps too much stress has been already laid: that there is no hindrance to the backward current through the pulmonary veins. The hæmoptysis thus finds a ready explanation, not in any passive accumulation of blood behind an obstruction, but in the backward flow, whether dependent on auricular or ventricular systole. In the ordinary mitral systolic murmur the congestion of the lung is almost a constant state; and, if my view be correct, the pre-systolic murmur would lead to the same result with even greater constancy.

In conclusion, let me repeat that we owe a debt of gratitude to Dr. Gairdner for having called special attention to this point in cardiac pathology, and that, in differing from him, and from many others whose position as clinical observers claims my highest respect, I feel that no other apology need be offered than an honest conviction that their theory will not explain the phenomena observed. In substituting another hypothesis for that which has been rejected, it must be remembered that it is only suggested as one deserving of consideration. It appears to me to meet all the requirements of the case, but to others it may seem inadequate. I commend it to the impartial consideration of those most competent to form an opinion on the subject.

Magna est veritas et prævalebit.

Bruton-street, March, 1872.

ON GONORRHŒAL OR URETHRAL RHEUMATISM.*

BY THOMAS BOND, B.S. LOND., F.R.C.S.,

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THE pathology and treatment of some so-called rheumatic diseases of the joints have been much misunderstood, and particularly so gonorrhœal rheumatism, or, as I think it might more correctly be called, urethral rheumatism.

The disease is not, in my opinion, rheumatism at all in the proper application of the word, nor is it the effect of any specific poison or constitutional diathesis. It often occurs quite independently of the acute urethral inflammation called gonorrhœa, as well as of any gouty or rheumatic predisposition; but it is dependent on a local condition of the urethra which I shall presently describe. Nevertheless, I shall continue to use the name urethral rheumatism as being most convenient.

This affection is more frequent than is generally supposed, and occurs commonly in men of an anæmic and weakly condition, whose habits and occupations are sedentary and unhealthy, and particularly does it occur in those cases in which a gonorrhœa has been treated by a long course of antiphlogistic medicine, or by an excessive and indiscriminate use of copaiba.

In my experience, it very rarely occurs in florid and healthy men. Out of upwards of fifty cases of gonorrhœa among the well-to-do classes which I have treated within the last year, I have had one case only of urethral rheumatism; while in the Lock Infirmary of St. George's Union at Westminster, where I treat over 300 cases of venereal disease yearly as in-patients, I find that a considerable number of the gonorrhœal cases among men, I may safely say ten per cent., are complicated with this disease. Those men are always the most anæmic, ill-fed, and wretched specimens of humanity possible to be seen; but it is a curious fact that the women of the same class are rarely affected by it. Again, the men are very rarely admitted for the gonorrhœa; they complain of rheumatism in the knees from cold, or say they have tender feet from over-walking. Lately I have made it a rule to examine the penis on such statements being made, and thus I have discovered many urethral discharges which would not otherwise have come under my notice; for often, when the discharge is perfectly evident and even profuse, they deny all knowledge of it, and in some cases I have no doubt they are ignorant of the local affection. The following is a typical case:—

John H——, aged thirty-five, married, a pale anæmic man, admitted to the infirmary October 6th for chronic rheumatism, said he had been subject to rheumatism for some years, and that he had never had any venereal disease; had been married many years and had children. Has much effusion in right knee-joint, complains of great pain in the heels and in balls of great toes when he walks, pain in elbows and shoulders on movement, and dull aching pains in all his limbs at night, and especially an acute pain in the back each morning. Skin dry and harsh, but complains of an exacerbation of sweating following the pain in the back. Has some congestion of the sclerotic vessels of the eye; denies that he had any discharge from the urethra. I examined, and found the lips stuck, and, on squeezing, a drop of perfectly transparent gleety fluid exuded. He then confessed that he had a sort of discharge fifteen years before, and that ever since he found the lips of the urethra glued when he made water. He said that he had been treated by many doctors and at several hospitals for rheumatism, but that his penis had never been examined before, and that nothing did him any permanent good. As an experiment I treated him with iodide of potassium, ten-grain doses, with lemon-juice and a full meat diet.—October 23rd: No improvement either in the pain or effusion; general health worse, if anything. Commenced to use a tannin-and-opium injection to-day; to leave off all medicine, to continue full diet with a pint of porter daily.—November 6th: Pain and effusion nearly gone, the appetite good, and the rest unbroken. He has increased in weight, but the discharge is not entirely cured. I shall continue the treatment another month as he has had so many relapses.

In this affection the first symptoms are the anæmic condition of the patient and the dull pain in the heels and ankles, with pain and effusion in the knee-joints, evidently a subacute inflammation of the synovial membranes and of the fibrous tissues, especially about the heel and ball of the great toe. I think I may say the effusion into the joints is invariable. It generally commences in the knees or ankles, but gradually affects the elbows, shoulders, and hands. There is also a most common and characteristic complication affecting the eyes, and this is a congestion of the sclerotic. The conjunctiva is sometimes slightly congested, and the caruncules are red and injected, but the great peculiarity is the congestion of the sclerotic vessels which are seen radiating around the cornea. This affection is quite distinct from gonorrhœal ophthalmia, and never leads to such destructive consequences. In the course of time the general health suffers very severely. The exacerbations of pain in the loins increase, and are followed by profuse perspirations every morning. The urine is scanty, the bowels are constipated, the skin is dry, the tongue coated, the face hectic, pulse feeble; great effusion occurs into the joints, with constant dull, aching pain, causing complete loss of appetite and sleep, the patient frequently remaining bed-ridden for months, so that the limbs often become permanently contracted unless great skill and care be used in attending to the position of the limbs. But suppuration does not occur. Lastly, and most important to be remembered in the treatment, comes the local condition of the urethra. With the above symptoms well marked I have rarely found an acute inflammation of the urethra, but I have never found the urethra in a healthy state. The condition varies considerably, from a profuse muco-purulent discharge to the slightest gleety fluid, unaccompanied by any inflammatory symptoms whatever. As a rule, pain, swelling, and redness are absent, and the discharge in the majority of instances amounts to nothing more than a slight gleet—sometimes a glairy mucus, sometimes a concreted pus. This state is of course liable to be increased and attended by irritability of the urethra or bladder, by local

* Abstract of a paper read before the Medical Society of London, Nov. 6th, 1871.

or constitutional causes, such as strong injections, violent exercise, coitus, &c., or by constipation, catarrh, or alcoholic drinks.

Pathology. — This disease is distinct from the specific syphilitic rheumatism, as well as from the ordinary constitutional or diathetic rheumatism; it is septicæmic, in fact a chronic pyæmia, the blood being constantly vitiated by a morbid material which is absorbed from the urethra. The exact process of the absorption I am not prepared to explain, and it is not easy to determine; for the disease is not often fatal, so that we have no opportunity of examining the urethra after death. But I am prepared to advance the theory that this absorption, whatever may be the process, goes on continually during the course of the disease, and that the abnormal condition of the blood is not maintained by the assimilation of the new materials of the blood to its altered state, as in the case when a specific poison is absorbed, such as the vaccine or syphilitic virus, the insertion of which into the blood, in however small a quantity, affects and alters the whole of the blood; and the alteration thus produced, inconceivably slight as it must be, is long maintained, the blood exactly assimilating to its altered self the materials derived from the lymph and chyle. Thus, when once inoculated, it retains by the exactness of its assimilation the taint which it has received, though after a time it may not have in it one of the particles which the taint first affected. This is the case in syphilitic rheumatism; while in urethral rheumatism the diseased state of the blood is maintained by the daily absorption of the morbid material from the urethra, the new blood being still assimilated to its normal state. Thus, as soon as the supply of the morbid material for absorption is stopped, the blood gradually eliminates the poison and returns to its healthy state. With regard to the peculiar immunity of women from this disease, I believe it to be owing to the greater thickness and coarseness of the vaginal epithelium to that of the urethra, the urethra in women being very rarely affected. It is possible also that they are less liable to it from not being pulled down by antiphlogistic treatment and the administration of copaiba. I have seen two cases of this disease in women: One, a prostitute, in whom, after I had cured the disease in the vagina, I found the urethra very inflamed and irritable. I used nitrate-of-silver injection, and both the discharge and the rheumatism soon left her. In the other case, a married lady, the symptoms were very characteristic. Pain in the heels, effusion in the knees and elbows, inflamed sclerotic, and the usual constitutional symptoms. On examination I found the vagina perfectly healthy, but a glairy fluid issuing from the os uteri, the lips of which were red and inflamed. I immediately formed the opinion that the continuance of the rheumatism depended entirely on the diseased state of the uterine mucous membrane, the epithelium of which is very similar in character to that of the urethra. I set myself immediately to cure the local condition by applications of nitrate of silver and tannin pessaries, at the same time administering steel and quinine. The recovery was very tedious, and the discharge was continually returning, always accompanied by increased effusion and rheumatic pains. It is now eighteen months since I first had the case in hand; for the last six months there has been no relapse. The lady is now in robust health; no discharge, and she has gained over a stone in weight. In this case I persevered with local remedies only, except that I gave sulphur and cream of tartar to regulate the bowels and kidneys.

I am sorry to have been unable to uphold my opinion with regard to the pathology of this disease by anatomical or microscopic examination, the reason of which I have before mentioned, so that I am obliged to rely on the experience I have had in its treatment and my observation of its many points of analogy to pyæmic disease to maintain my proposition. The disease is considered very difficult to cure, and certainly is so when treated by the usual antiphlogistic and constitutional remedies recommended in ordinary synovitis. Acute inflammatory symptoms being very rarely present, antiphlogistic measures are not often resorted to, and I have never known any good result from their employment, except the temporary removal of scalding and urethral inflammation. Blistering, Scot's bandage, perfect rest, friction, and mineral baths, I have used without the slightest benefit. Iodide of potassium and colchicum I have found worse than useless, and I never give it except, as in the case I have related, in order to compare its effect with the result of similar doses in ordinary rheumatic affections. The effect of iodide of potassium is to increase the anæmia, weaken the pulse, impair the appetite, and often to cause petechiæ or purpura without relieving the pain or effusion in the slightest degree. The general treatment I have found most efficacious is quinine and hydrochloric acid, or steel and strychnine, together with the administration of port wine, stout, eggs beaten up with brandy, and general high feeding, with soothing local applications, rest, poultices, and wet packings; but even then the disease often cannot be cured, although the appetite and general health return, and the pain and swelling almost disappear, yet the disease is sure to recur on leaving off the treatment should any urethral discharge remain. A very severe case first led me to form the opinions I have expressed. I had treated a gentleman for effusion in the knee-joints for several months without success. Knowing he had a slight urethral discharge which he thought nothing of, I determined to cure it, and told him I should try a course of injections. I commenced with alum and lead, which brought on a good deal of discharge, so I discontinued it. The discharge then diminished, but a good deal of irritation remained, so I prescribed half a drachm of tannin to six ounces of water, and mixed it myself. The tannin dissolved easily in the cold water; I then added two drachms of tincture of opium to soothe the irritation. The clear solution of tannin immediately became densely clouded with a flocculent brown substance, in very minute suspension, but subsiding in about half a minute into a light precipitate filling about half the bottle. The idea immediately struck me that it ought to be a very valuable injection for gonorrhœa and urethral discharges, for an inflamed surface requires a constant application to properly control the disease, the occasional application acts only as an irritant. Here I had an injection which answered all the purposes of the soluble bougie without any of the inconvenience; for by simply shaking up the injection, and using it immediately, the flocculent substance, which I conclude is gallotannate of morphia, is precipitated out to the sides of the urethra; and by keeping the injection in the urethra about a minute, and then letting it gradually escape, the clear fluid comes away, but leaves all the sediment behind: and I have found, from a number of experiments, it takes about four hours for all the solid residue to escape. It can be seen as a dark-brown spot gradually being deposited on a piece of lint placed over the meatus; thus, by injecting every four hours, I found that I could keep a powerfully astringent application in constant contact with the urethral mucous membranes. In the case I have been referring to, I ordered this injection to be continued several weeks. It cured the discharge entirely, and the rheumatism soon after began to improve; and in three months, the effusion and pain having entirely disappeared, all treatment was left off. Directly after the patient contracted another discharge, which he neglected, and in less than a month the rheumatism returned worse than ever, the effusion was very great, and the pain very severe. He became extremely emaciated, with profuse sweats, and hectic—in fact, with every symptom of blood-poisoning. His friends took him into the country for three months to try a course of the Bath waters. He came back little improved, with the effusion into the joints no better, and still with the gleety discharge. This I again cured with the tannin injection; and in six months from that date he increased in weight from nine to eleven stone, the rheumatism got quite well, and he has since had no return, nor is he at all liable to rheumatic pains.

Deduction: That urethral rheumatism is a slow form of pyæmic poisoning, due, not to a sudden absorption,* but to a gradual vitiation of the blood by progressive absorption of the urethral discharge; that the vitiated state is not maintained independently of the local disease; that, when the discharge is thoroughly and permanently stopped, the rheumatism may soon be cured, and has no tendency to return, except by the access of a fresh urethral discharge.

* It was mentioned during the discussion that sometimes sudden and acute inflammation of a single joint takes place. I have seen two such cases in which one ankle was affected. The gonorrhœa was cured immediately by injection in one case, and the ankle got well in a fortnight, the health not being affected. In the other the discharge was allowed to run on, and the acute inflammation became chronic, all the joints became affected, and the patient suffered some months from urethral rheumatism.

CASE OF ABDOMINAL ENCYSTED DROPSY CO-EXISTING WITH PREGNANCY; OBSCURE DIAGNOSIS.

BY ANGUS MACKINTOSH, M.D.

IN October last year the mother of B. J——, a carpenter's wife, engaged me to attend her daughter in her third confinement (having been with her in her previous accouchements), which was expected towards the end of November. She was thirty-five years of age, healthy and strong.

On November 20th I was called in great haste to see the patient, the messenger stating that she was in labour. I arrived at the house in a short time, being only a distance of three miles from my own residence. On being questioned, she said it was her full time, and complained of considerable pains in the lower part of the abdomen. From her enormous size she expected twins, as did her neighbours. The abdomen was greatly distended, and appeared almost uniform—i. e., not protruding more to one side than another. On examination per vaginam, the os uteri, which was very high up, could only be reached by a little difficulty—indicated no symptoms of labour; in fact, it was actually closed. I told her she must have a little more patience, and not to send for me again till she should experience real labour pains.

In course of a week thereafter I was summoned during the night to attend her. The message was that "there was no mistake now of her being in labour." To my surprise and disappointment, on examination I found the os in the same state and position that I left it the week previous. I said she had again fooled me, to which she replied that something must be done, for she could live no longer that way. I placed her on her back and examined the abdomen for the first time, and, to my great astonishment, found it enormously distended with fluid. I told her that she was dropsical and not with child, of which statement she appeared rather sceptical. I proposed an operation, as she was suffering from great dyspnœa, from the upward pressure, no doubt, of the diaphragm, and also from much flatulent disturbance by compression on the bowels and stomach. Next day I called to my assistance an aged and experienced medical gentleman, and, after a thorough examination, we failed to detect any indication of a fœtal existence, either through the parietes of the abdomen or the vagina. Consequently we considered it necessary to operate immediately, the symptoms being urgent. We placed her at once on the edge of the bed, and relieved her—by tapping in the median line, three inches below the umbilicus—of six gallons of water, at which she expressed great relief. In a month from the first operation I again tapped her of four gallons of a gelatinous and fetid liquid. The third operation was a fortnight after the second, when three gallons were taken; the fourth eight days after the third, when two gallons of a grumous heavy fluid were taken. The patient daily got weaker in spite of tonics and stimulants. I suggested a consultation, as the features of the case were becoming more serious in consequence of constant urging and sickness, with great oppression in breathing. Assisted by my esteemed friend, Dr. William Hender, of Callington, I tapped her for the fifth time—three weeks after the fourth operation,—and removed four gallons of brown, fetid, and partly putrid liquid.

After the operation was completed we could detect on the left side a circumscribed and well-defined tumefaction, mensuring about five inches in diameter, which we concluded after a careful examination to be a serous cyst. On reintroducing the trocar and canula through the same opening, and turning it at an acute angle in the direction of the swelling, my assistant at the same time pressing the swelling towards the trocar, I felt it most distinctly penetrating the cyst. On withdrawing the trocar there was a gush of transparent and almost colourless serum, to the amount of at least one pint, quite different in specific gravity and colour from any seen before. In two months' time she was, altogether, tapped of twenty gallons.

In a week from the last operation I was asked to see her, as she was said to be very ill. On entering the house I was bewildered to find that she had given birth a few minutes before to a living, well-developed female child. The child and herself are doing well, though she has suffered at times from abdominal tenderness. It is now a month since her confinement, and there are no signs as yet of any evil consequences.

Remarks.—This case appears interesting owing to the rarity and infrequency of its complications. Menstruation ceased about nine months before the first operation. The mammæ were flabby and very little enlarged; the abdomen enormously distended with fluid, so much so that the pressure on the venous trunks internally caused great enlargement of the veins externally. Palpation and the stethoscope failed to detect any reliable signs of a fœtus, and examination per vaginam did not indicate a state of pregnancy. These symptoms, accompanied by dry skin, great thirst, scanty urine, and general emaciation, convinced us that we had to do with a case of ascites; and the result shows the extreme difficulty of arriving at a correct diagnosis in some cases which may appear at first sight easy, and proves the necessity of carefully weighing every symptom and sign to guide us in obscure cases like that narrated. The fœtus must have been forced upwards and backwards into the hollow of the spine by the fluid, so as to completely obscure any palpable indications of its presence, which fact no doubt, saved the uterus from being punctured by the trocar. I believe the pressure on the portal circulation caused congestion of the internal organs; hence the dropsy. The cyst associated with ascites I can faintly understand, though, so far as I know, of very rare occurrence, and of itself worth recording. Two facts, however, connected with the circumstances puzzle me: first, that labour and birth were protracted for two months at least in consequence of dropsy and operations; and, secondly, that it was possible for a fœtus to survive for seven months under such adverse and unfavourable circumstances.

Callington, Feb. 1872.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

REMOVAL OF LARGE FIBRO-CYSTIC TUMOUR OF LOWER JAW; RECOVERY.

(Under the care of Mr. CHRISTOPHER HEATH.)

FOR the notes of this case we are indebted to Mr. S. Coupland, ward clerk.

The patient is a native of Cumberland, and has been a carter ever since he was eight years old. His parents are living and healthy. When a child he suffered from suppurating glands in the neck and submaxillary region, which were opened; otherwise he has always enjoyed good health. Never had syphilis. Has lived well; drinks beer freely; is often drunk (i. e., on an average once a week). Has followed his occupation up to the time of admission. About six years ago he first noticed a small, hard swelling, about the size of a marble, situated in the right cheek, attached to the gum and lower jaw, but movable under his fingers. From the first it had an aching pain, dull, and constant. The tumour continued to increase in size, and four years ago it was lanced in the gum; it then began to discharge, and has continued to do so slightly ever since. He has noticed that the discharge is more abundant after drinking much. It has been lanced twice since, and within the last six months it has been twice tapped by Mr. Watson, of Lancaster: the first tapping just before Christmas; the second, five weeks before admission. Mr. Watson says that at each tapping about four ounces of fluid were drawn off. From the displacement inwards of the two anterior molars

and the second bicuspid tooth by the increased growth of the mass, these teeth were extracted two years ago. Since Christmas the tumour has grown with increased rapidity, and has become more tender. During this time the patient says he has lost a stone and a half in weight, and that his appetite has diminished. The patient cannot assign any cause for the origin of the growth. He has had no bad teeth in that jaw. Remembers having had a blow on the jaw with a pitchfork handle before the tumour appeared.

July 10th.—The patient is fairly built, florid, and sunburnt. He does not look ill. Tongue clean; appetite better than it has been; pulse 76, full and bounding.

The right side of the face presents a large, smooth, globular swelling, which occupies the whole side. It extends in front to the angle of the mouth; behind, to a distance of about an inch behind the lobule of the ear, measuring in this diameter 7½ in. Above, it extends from the tragus of the ear along the lower margin of the orbit to the side of the nose; below, on a level with the hyoid bone. It measures from above, down over the greatest prominence, 8½ in. The circumference of the mass measures 18 in. The right angle of the mouth is drawn slightly upwards and outwards; but the contour of the lower lip is unaffected, and the contour of the chin quite preserved. The upper part of the mass is more vascular in appearance than the lower. On the under surface are some cicatrices from the abscesses which were opened when he was a child. The rest of the surface of the tumour is quite smooth, not

Before the operation. (From a photograph.)

ulcerated. Temperature of the cheek, 99·7°. The tumour is more tender posteriorly than elsewhere. Its lower two-thirds feel hard and resisting, the skin being quite movable over the mass. The posterior portion of the tumour is also solid, as well as a portion which extends in front of the ear for about an inch. The rest of the mass is soft and fluctuating, evidently containing fluid, and the upper margin of the solid portion can be distinctly felt across the tumour. Inside the mouth the alveolar border of the right side of the lower jaw is much widened, extending inwards, so as to diminish the cavity of the mouth behind the first bicuspid. The second bicuspid and first and second molar teeth are wanting. The patient says the third molar is present; but it is not visible, nor can it be felt. On the widened alveolar border is an ulcerated surface, covered with a layer of thin purulent fluid, which is continually oozing. The tumour evidently arises from this part of the lower jaw; for, anteriorly, a thin shell of bone can be felt continuous with the jaw and with the surface of the tumour. The upper jaw does not seem to be implicated in the growth. The teeth in it are all present; but the alveolar border has been displaced inwards from the growth of the tumour, so that the roof of the mouth appears contracted.

July 11th.—Patient feels rather sick this morning. Temperature 98·4°; pulse regular, 72.

12th.—10 A.M.: Temperature 99°; pulse 80. Urine, 82 oz.; specific gravity 1013; acid; no albumen.

To-day (12th), at 2 P.M., chloroform having been administered, Mr. Heath proceeded to remove the tumour. He first extracted the right canine and second incisor teeth of the lower jaw, a piece of the jaw coming away with the teeth. He then made a vertical incision to the right of the symphysis through the lip down to the base of the jaw; from the lower end of this incision he cut upwards and backwards over the tumour towards the ear as far as one inch above the angle of the jaw; in making this cut he divided the facial artery. Ligatures were applied before the incision was completed. The whole length of the incision was about nine inches. The superficial tissues were then dissected off the tumour, the large upper flap being first raised; and the tumour was carefully shelled out. In dissecting up this flap the facial artery was again cut and ligatured. The cyst at the upper part of the tumour being now fully exposed, it was laid open by a free incision extending right across it, and about ten ounces of fluid escaped. Mr. Heath then continued to separate the mass from the skin at the lower part, and, having cleared it as far as the anterior incision, he sawed through the jaw where the teeth had been extracted. He then cut through the mucous membrane and muscles attached to the jaw, and here again some vessels had to be secured. Having completely sepa-

After recovery. (From a photograph.)

rated the mass, he attempted to forcibly depress the jaw so as to disarticulate it; but, the coronoid process becoming caught against the malar bone, he had to detach the process by the bone forceps. On depressing the jaw, he found that a small portion of the condyle was free from the growth. As he was proceeding to disarticulate, the remains of the lower jaw gave way just below the condyle, the tumour shelling out from the expanded bone round it. The posterior part of the jaw was left nearly down to the angle; a small piece of this was afterwards cut off with the bone forceps. About four ligatures were applied to bleeding vessels, and the rest of the hæmorrhage was arrested by the actual cautery. The wound was then thoroughly sponged out and sewn up; for the incision through the lip hare-lip sutures were employed, and a very fine suture for the mucous membrane of the lip, the rest of the incision being closed by silver wire sutures; the whole of the wound was then painted with collodion. There was not very much blood lost during the operation. The patient was not thoroughly under the influence of chloroform the greater part of the time.

After removal the tumour was almost globular in form. it measured 3½ in. in diameter at its widest point. It was slightly lobular on the surface. It weighed 13½ oz.

Over the whole of the lower part was a thin shell of expanded bone; for the greater part this was over a solid growth, but at the upper and outer aspect was a large cyst capable of containing about 6 oz. of fluid. The lower part of the wall of the cyst was bony, but the whole of the upper part was free from bone. The whole of the inner wall of the cyst was formed of a thin layer of bone. Just anterior to this large cyst was a smaller one containing about ½ oz. of thick fluid, in which was a large quantity of cholesterine. Its walls were bony everywhere. Both cysts were lined by a smooth thin membrane. On the inner side of the tumour were two openings about ¾ in. in diameter, which had opened into the mouth. They communicated with a large cavity in the centre of the tumour, into which the finger could be pushed as far as the second joint. On making a section right through the mass, this central cavity was found to be about 2 in. in length. The inner surface was very irregularly lobulated. The lobules varied in size from a pea to a filbert. They were covered by a smooth membrane. The tumour was moderately firm, of a whitish colour, and small points of bone were scattered through it. On scraping, it yielded a whitish fluid mixed with fragments of the substance of the tumour. Under the microscope this was found to consist of a few spindle cells and a vast number of free oval nuclei, containing one, two, or three shining nucleoli. Some of the nuclei were perfectly circular. The average diameter was about $\frac{1}{1500}$ inch.

On examining sections made from one of the lobules from the central cavity of the tumour, it was found to consist chiefly of a dense fibrous tissue, amongst which were oval and irregularly shaped spaces, having an appearance much resembling acini and ducts of glands. They were completely filled with oval nuclei, each containing one or more bright shining nucleoli. They were arranged along the walls of the spaces so as to look like epithelium, but they had not the distinct cell and nucleus characteristic of epithelium. The relative proportion of the spaces and fibrous tissue varied greatly. At some parts it was almost firmly fibrous, and at others the spaces formed the greater part of the growth. The patient made a quick and uninterrupted recovery.

SOUTHERN HOSPITAL, LIVERPOOL.

FRACTURED SPINE WITH DISLOCATION; REDUCTION WITH PULLEYS.

(Under the care of Dr. WOLLASTON.)

THE following case has been communicated to us by Mr. Richmond Leigh. We refer our readers to our hospital reports for Jan. 23rd, 1869, where a case similar to this, under the same surgeon, is recorded. The same treatment was carried out, and the patient made a good and quick recovery, which seemed to be owing to the reduction having been effected without loss of time.

J. McG——, a porter, aged twenty-nine, was admitted into the hospital on Jan. 26th, 1871, suffering from fractured spine. The accident occurred from a bale of cotton falling on his back while in the stooping position. The seat of fracture was about the fourth or fifth dorsal vertebra, and there was overlapping of the lower portion for about an inch.

Within half an hour after his admission chloroform was given, and reduction effected by means of pulleys, traction being made on both thighs and the chest, when the deformity disappeared. There was priapism after the reduction, and slight paralysis and hyperæsthesia of the legs, which continued for about a fortnight after the operation. An opiate was given after the operation, and the acetate of ammonia as a simple febrifuge. The paralysis and hyperæsthesia gradually disappeared, but he suffered considerably from pain over the right side of the sacrum and the gluteal region, which was relieved, after morphia subcutaneously and blisters had been tried, by the application of Corrigan's heated iron.

He was discharged cured on the 7th of May, 1871, and was shortly after able to do the ordinary work of a porter, suffering merely from slight angular curvature of the spine.

GENERAL HOSPITAL, VIENNA.

HERPES IMPETIGINIFORMIS.

(Under the care of Professor HEBRA.)

THE following account of a rare form of skin disease occurring during the course of pregnancy will be read with interest.

At the beginning of last June a woman twenty-five years old, and in the ninth month of pregnancy, was admitted into Professor Hebra's small-pox ward, under the supposition that she was suffering from varioloid. She had been ailing for three weeks, but her illness had only taken an acute course a few days previously. It began with lassitude and loss of appetite; she soon became so weak as to be unable to leave her bed, and had fever and repeated rigors. It was soon found that her disease was not small-pox, and she was transferred to a ward for general skin affections. At this time the character of the eruption was clearly marked. At the root of the neck, on the front of the chest over the sternum, and around and between the mammæ, groups of small vesicles had formed on an inflamed base. The vesicles had enlarged; their contents became cloudy and yellowish; a number of vesicles had coalesced, and, bursting, had formed brownish yellow and adherent crusts. The skin around the vesicles was intensely inflamed. The eruption had first appeared on the external genitals. The labia majora, mons veneris, and the neighbouring skin of the abdomen and inner part of the thighs were, on the date of the patient's transference to another ward, covered with large, yellowish crusts, and vesicles in various stages of development.

In the course of the following week groups of similar vesicles appeared on the face, over the whole chest and abdomen, on the arms (where the patient complained especially of severe pain), and on the front of the thighs and legs. Thus rather more than a fortnight after admission the eruption had reached its height, and the front of the body was almost entirely covered with yellowish crusts; these began to dry up and exfoliate, first at the root of the neck, without the occurrence of ulceration and loss of substance.

At this time were found near the ankles several large bullæ, containing slightly cloudy fluid, resembling those of pemphigus. The patient, who had some days previously complained of "cold along the back," and had a pulse of 96, began to feel warmer; her pulse was found to be 92. She had repeated rigors, and was so weak that she could not raise herself in bed. No observations were made of her temperature. Her treatment throughout was mainly expectant; she was allowed chicken and wine, and anything she fancied. For the pyæmic symptoms she took quinine, and a lotion composed of six grains of perchloride of mercury and one pint of lime-water was applied to the genitals. As the pain prevented her sleeping she was ordered half-drachm doses of chloral hydrate at night. On June 15th, Professor Hebra had, as an experiment, her left leg bandaged with strips of diachylon plaster, but without any striking result.

On June 17th the patient was safely delivered of a healthy child. This was her second pregnancy; in the first she miscarried. On the 19th she was going on well; was cheerful, and the lochia were normal. The eruption was scaling round the neck. On July 5th she had a slight attack of hospital dysentery, and was treated with tincture of perchloride of iron in fifteen-minim doses three times a day, and with dilute sulphuric acid. At this time she had no sign of any fresh eruption and was scaling rapidly. On July 25th, when the last note was taken, she was almost convalescent; her face (which was the part least affected) was quite normal, as also her chest, and the remainder of her body was rapidly becoming free from scales.

In some remarks upon this case, Professor Hebra said, that, in his very considerable experience, he had only as yet seen five such cases, of which this was the fifth. They all occurred in women at full time except one, which took place during the course of pregnancy; the first four all terminated fatally. They all resembled one another in beginning in the region of the genitals; in their general diffusion over the body in a later stage; and in the herpetic character (groups of vesicles on the same inflamed base)

which they presented. They were all accompanied by fever and rigors. The disease might be called "herpes impetigiuiformis" from the appearance of the crusts. There was no restriction to the course of certain nerves as in an ordinary zoster. Finally, it was a most dangerous disease.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 12TH, 1872.

T. B. CURLING, F.R.S., PRESIDENT, IN THE CHAIR.

ACCOUNT OF A CASE OF RESECTION OF THE SHOULDER AND ELBOW JOINTS IN THE SAME ARM, FOR GUNSHOT INJURIES.

BY WM. MAC CORMAC, F.R.C.S.,
ASSISTANT-SURGEON TO ST. THOMAS'S HOSPITAL.

THIS paper detailed the history of a French soldier who had been wounded at the battle of Sedan. The right arm, in the region of the shoulder and elbow joints, was extensively injured, the soft parts being much lacerated and the bones extensively comminuted by a shell explosion. The question arose whether it was at all possible to save the limb. Rather, however, than perform disarticulation at the shoulder-joint, Mr. Mac Cormac determined to excise both the shoulder and elbow joints—an operation hitherto, he believed, unique. The patient narrowly escaped death from pyæmia, but he afterwards made a satisfactory recovery; and the interest of the case centres in the amount of usefulness subsequently enjoyed by the limb. Some portions of necrosed humerus have yet to come away, and in the deltoid region a sinus still remains. The elbow is soundly healed, and regeneration of the excised bones has taken place. The operation was performed subperiosteally; and in the after-treatment the limb was supported on carefully adjusted cushions—a method Mr. Mac Cormac prefers in most cases to the employment of splints. The shoulder can now, after an interval of eighteen months, be moved freely backwards and forwards, but not raised from the side, the deltoid muscle having been almost completely destroyed by the original injury. Flexion, extension, and rotation are very perfect in the elbow, and the usefulness of the hand is nearly as good as before. Four inches of the upper end of the humerus, very greatly comminuted, were removed; and a long piece of ulna, in addition to the head of the radius and the articulating condyloid surface of the humerus, was taken away. Mr. Mac Cormac considers that he may fairly classify this case as one of successful double resection of the two principal joints in the same upper extremity.

The PRESIDENT remarked that the case was probably unique, and as such very interesting.

Mr. CROFT thought that splints were worse than useless in cases of resection in the upper extremity; had always used sand-bags with very good effect; and asked the author what special means were adopted to keep the limb quiet.

Mr. TIMOTHY HOLMES thought that all excisions might be treated without splints; but he preferred in elbow cases to use a very light splint, which really did no harm, and was specially adapted for children. He quoted a case in which no splints were used, a result being that the ends of the bone eventually projected from the wound. He asked for Mr. Mac Cormac's experiences as to subperiosteal operations; believed that the amount of bone saved was often hurtful rather than beneficial; instanced a case in point; and remarked that in successful excisions of the head of the humerus the arm can always be moved some way from the trunk, though the want of power in this case may have been caused by the great amount of injury done to the deltoid muscle.

Mr. JOHN WOOD had discarded splints for some time; and, ten days after the operation, commenced and continued to alter the position of the limb once every twenty-four hours, believing that with careful and frequent manipulation a very fair olecranon may be produced. He presumed that the question of splints or no splints entirely depended upon whether a movable or an anchylosed joint was required.

Mr. SPENCER WELLS quoted a case that had occurred to a continental surgeon at Metz, in which a subperiosteal section of the entire humerus was successfully made. He believed that in active service splints were necessary, and that plaster-of-Paris bandages answered exceedingly well.

Mr. THOMAS SMITH failed to comprehend how splints could be safely or properly dispensed with, and averred that with children they were absolutely necessary.

Mr. MAUNDER thought that the question of splints wholly depended upon the sort of joint desired. He rarely used splints at all for the elbow, except in cases of children, and then only during the first week, but always applied them in knee cases, though he considered it an open question in excisions of the hip.

Mr. CALLENDER was surprised that no reference had been made to the very capital anterior splint used in America, and asked Mr. MacCormac why no effort was made to save the limb in its entirety.

A VISITOR (an American surgeon) said that the bent wire splint was much used in the United States, and believed that, in subperiosteal operations, mischief was sometimes caused by the subsequent growth of awkward spiculæ, which might, and indeed sometimes did, endanger arteries.

Mr. SAVORY commented sarcastically on the varied experiences and the various facts that had been enunciated in the course of the discussion. Believing it to be an axiom in surgery that repose was necessary to repair, he was surprised to hear surgeons advocating a "perpetual motion" style of practice with reference to excised joints. He also took exception to the title of the paper, inasmuch as about four inches of the humerus and a large mass of the ulna were removed by the operation.

Mr. MAC CORMAC, in replying, answered this last objection by remarking that the fragments alluded to were detached, lying in the wound bathed in pus; so that there was no option as to their removal. And with respect to an observation by Mr. Callender, Mr. Mac Cormac pointed out that excision of the joint was the recognised method of treatment for gunshot injuries of the shoulder, and that it was attended by a far smaller proportionate rate of mortality than was conservative treatment—thirty-five per cent., as compared with fifty-two per cent. according to Billroth's tables.

ON THE SURGICAL TREATMENT OF SUPPURATING OVARIAN CYSTS, AND ON PELVIC ADHESIONS IN OVARIOTOMY.

BY T. HOLMES, F.R.C.S.,
SURGEON TO ST. GEORGE'S HOSPITAL.

A case was related in which chronic suppuration occurred in an ovarian tumour, after paracentesis had been performed for the first time. Ovariotomy was postponed for some months on account of the patient's condition. When it was performed the cyst was found extensively adherent in other directions, and so tightly wedged into the pelvis that it was impossible to reach its pedicle. It contained about a gallon and a half of fluid, of which about half was pure pus. The remains of the emptied cyst were dragged out of the abdomen, a clamp was applied to its neck (at a distance above the pedicle which could not be accurately ascertained), and the wound was closed. The patient recovered, and after her recovery no sinus was left, nor was any tumour to be felt. The symptoms of acute and chronic suppuration in ovarian cysts were discussed, and it was attempted to be shown that if the general condition admits of it the suspicion of suppuration is a reason for performing the operation instead of delaying it. The case was also used to show that, in some instances, the results of ovariotomy may be perfectly favourable, though pelvic adhesions have prevented the complete delivery of the tumour. If the neck of the cyst admits of being embraced in a clamp, the lower portion of it may be obliterated during the healing of the wound. The superiority of this method, when feasible, to the other courses which may be pursued in dealing with pelvic adhesions, was shown.

Mr. BRYANT remarked that the accurate diagnosis of a suppurating ovarian cyst was most important; that wasting, a hot skin, a permanently high temperature, bad appetite, local pain and tenderness on pressure, all indicated suppuration. If any doubt as to the diagnosis exists, he would be still more induced to interfere quickly, to remove the cyst if possible, or to take away as much as could be removed. He quoted a case to show the desirability of not leaving ligatures, and one also that showed the useful peculiarities of catgut.

Mr. SPENCER WELLS thought that with care the diagnosis between a suppurating cyst and peritonitis could be ascertained without great difficulty. An elevated temperature night and morning, with or without increase of pain on pressure, were two positive signs of the presence of a suppurating cyst. And if peritonitis exist operative procedure is still more decisively indicated. A very serious case under his care, in conjunction with Drs. Farre and Watson, in which peritonitis occurred from the bursting of the cyst into the abdominal cavity, ultimately did well. He considered it undesirable to separate adhesions before tapping the cyst, that as much should be removed as possible, and that it was a good plan to leave a drainage-tube in the wound after the operation, to give free exit to the suppurative discharges.

Mr. HOLMES, in replying, doubted if the diagnostic signs spoken of by Mr. Wells were positive as well as negative, because in some cases high temperature exists without suppuration, and in some cases of peritonitis the temperature has been persistently high.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MARCH 5TH, 1872.

MR. JOHN HILTON, F.R.S., PRESIDENT, IN THE CHAIR.

MR. MCCARTHY exhibited two interesting cases. The first was a child with Congenital Hypertrophy of the Skin corresponding to branches of the sacral plexus: it was first noticed when the child was three weeks old, and is getting larger. The President said it had much the appearance of ichthyosis. The second case was a child about six years old with patches of Discoloured Skin on the legs and dorsum of the feet. Along the spine of the scapulæ were a number of small nodulated growths, such as Dr. Addison spoke of in bronzing of skin.

A report from the Morbid Growths Committee on Dr. Gowers' case of enlarged liver, &c., was read by Dr. Church. The growths in the liver and in the mammary and other glands were of a like character, and described as medullary sarcoma. The disease commenced in the lumbar glands.

Mr. CARR JACKSON showed a patient whose thigh he had amputated at the hip-joint, after excision of the head of the femur had failed. The patient, aged twenty, had been suffering from hip-joint disease for about five years. Two years ago the head of the femur was excised. He did well for a time, and could get about on crutches; then sinuses opened again, and it was thought better to amputate at the hip: this was done about two months ago. — Mr. Jackson then showed a child whose astragalus he had removed for caries. Also an astragalus, removed by Mr. Shillitoe of Hitchin, from a bricklayer who had dislocated it in a fall.

In reply to the President as to the condition of the acetabulum in the first case, Mr. Jackson said he thought the disease began in the ligamentum teres, and that the acetabulum was healthy.

Dr. GREENHOW exhibited a specimen of Softening of the Left Anterior Cerebral Lobe, with plugging of the left anterior cerebral artery and right middle cerebral artery; and read an interesting account of the case. The patient, a woman aged twenty-seven, had a succession of fits at the time of her delivery, and was found to have right hemiplegia; the muscles of the face and tongue were involved; she was also aphasic. About two months afterwards she had another fit, and then she was found paralysed on the left side. She died a few days after. In addition to the lesions above-mentioned, the heart was much diseased, the aortic valves covered with vegetations, and the mitral orifice narrowed so as to admit only one finger.

Mr. GAY showed the parts removed in three cases of Excision of the Head of the Femur. Two were from boys about six years old; one presented in a marked degree all the recognised symptoms of hip-joint disease, the pain especially being severe; the other had so few symptoms that for a time the character of the disease was doubted—pain was quite absent in whatever way the limb was moved. In the first case it was seen that the head of the bone was hollowed out, and a sequestrum was lying in the cavity; he thought the intense pain here was caused by the tension. The third case was that of a man aged thirty-two, from whom part of the shaft as well as the head of the bone was removed. Referring to Mr. Jackson's case, he said he had no objection to remove the head of the bone when the acetabulum was diseased, as it was generally secondarily affected.

Mr. T. SMITH thought acetabular disease was very serious; and asked if Mr. Gay would remove the carious bone or leave it.

Mr. GAY said that the disease generally began in the thigh-bone, and the other parts of the joint were diseased secondarily; when the primary cause of disease was removed they would get well; he would, however, scoop away or remove dead bone, but not the parts only denuded of cartilage; all the cases he had so treated had done well.

Dr. PYE-SMITH exhibited a Malformed Heart from a child fourteen weeks old. It had been cyanotic during life, but no murmur could be heard over the heart. The great vessels were transposed, the aorta arising from the right ventricle, the pulmonary artery from the left; the right ventricle was dilated and much hypertrophied; the venæ cavæ and tricuspid valve were normal; the foramen ovale open, cribriform; the left side of the heart thin, and more like a normal right side; the ductus arteriosus patent; the septum ventriculorum complete. The coronary arteries arose from the aorta.

Dr. C. T. WILLIAMS showed a specimen of Ulceration of the Vermiform Appendix, causing local peritonitis.

Mr. WAREN TAY showed a Tumour removed from the inner side of the right arm of a child aged nine months. The growth appeared at the fourth month; it was soft, semi-fluctuating, and the skin not freely movable over it. Microscopically, it consisted of fibroid tissue, enclosing a quantity of fat—what Mr. Holmes describes as the congenital innocent tumour of children.

Mr. HAWARD showed a Fibroid Tumour of Testicle from a patient aged eighty-one. The right testicle had gradually enlarged; there was no pain, and it only gave inconvenience by its weight and dragging on the cord; it was nodular, hard and elastic; cord not affected. No glands of the groin were enlarged. The man died from sloughing of the scrotum. This was a very rare specimen. It arose from the tunica albuginea, and the secreting tissue was not affected. Microscopically, it was made up of fibroid tissue.

Mr. HULKE asked if sections had been taken from several parts of the tumour, and if any cartilage cells had been found.

Mr. HAWARD said none could be found.

Mr. ANDREW CLARK showed a number of organs—heart, kidneys, a rib, &c.—affected with melanotic disease, secondary to melanosis of the eye.

Mr. T. SMITH showed a fine specimen of an Aneurism of the Right Axillary Artery, for which the subclavian was ligatured. The patient, aged thirty-two, had noticed the swelling for about nine months. When seen it was the size of a lemon, freely expanding, and pulsating. The radial pulse was not affected. The back of the hand was œdematous, and the fingers were clubbed. The patient died of pyæmia. Pressure had been attempted, but was obliged to be given up; for though it controlled the supply of blood to the tumour, yet the pain it gave could not be endured for more than a few seconds.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 8TH, 1872.

MR. COOPER FORSTER, VICE-PRESIDENT, IN THE CHAIR.

Dr. BUZZARD showed a case of Unilateral Face-Atrophy, dating from an attack of chorea. A female, aged twenty-five, applied to him at the National Hospital for Paralysis on account of fits, epileptic in character, which had troubled her for eleven years. She had been attacked with chorea when six years old, and again at thirteen; and, after this second attack, the right side of her face was observed to grow thin. The atrophy involved chiefly the frontal, malar, and inferior maxillary bones, together with the alar cartilage, the buccinator, masseter, and, in a less degree, the temporal muscles. The tongue was greatly wasted on the same side, and the palate was also involved. Cutaneous sensibility was unaffected. She was liable to attacks of

hemicrania affecting the right side of the head, which had commenced between the first and second attacks of chorea. There was some mental deficiency. A systolic mitral bruit was present. Dr. Buzzard was inclined to refer this rare and obscure case to the category of those described by Eulenberg under the title "progressive facial hemiatrophia," and suggested the possibility of embolism of a nerve-centre accounting for the peculiar disturbance of nutrition.

Mr. G. LAWSON exhibited a little girl, aged fifteen months, with Congenital Hypertrophy of the Tongue. The child was so stunted and ill-developed as to give the appearance of an infant about three months old. The fontanelles were as wide open as at birth. She showed no signs of any teeth, nor had she indicated any marks of intelligence. The tongue was a large fleshy mass, which not only filled the mouth, but a large portion lolled outwards between the lips. On pressure with the finger, the child would withdraw the tongue into the mouth; but it was almost immediately afterwards again protruded. Notwithstanding the size of the tongue, the child could suck well, and take the required amount of nourishment by the bottle. The father and mother were healthy, and had two other children, both of whom were healthy and intelligent. The child was born at the full period of utero-gestation. The mother attributed the defect to a strong impression she received when visiting the Crystal Palace, when in about the third month of pregnancy. She said she was terribly shocked by the appearance of some African figures with large pendulous lips.

Dr. C. J. B. WILLIAMS thought the condition of the tongue probably due to obstructed circulation.

Mr. HENRY ARNOTT related the particulars of a similar case in which pieces of the tongue were removed, and he had found the muscular bundles to be atrophied. If a similar case came under his observation again, he would be inclined to ligature the lingual arteries.

Dr. BURDON SANDERSON said that, in the best recorded cases of the kind, the lymphatics were enlarged.

Mr. ARNOTT had not made this out in the case to which he referred.

Dr. HERMANN WEBER read a paper "On a Case of Hyperpyrexia in Rheumatic Fever successfully treated by Cold Baths and Affusions." The patient was a youth aged sixteen, who had rheumatic fever (first attack) in August, 1871. The affection of the joints was well marked, but not excessive. The temperature of the body varied between the ninth and twelfth days of the disease from 101·6° to 102·2° F.; the pulse between 98 and 118; the respirations between 20 and 24. The lungs were free, and there was only the slightest indication of a murmur with the first sound near the apex. The medicinal treatment consisted of three grains of quinine three times a day. On the morning of the thirteenth day great restlessness, vomiting, excessive micturition, involuntary motions, delirium, tendency to coma, and lividity of face, supervened, simultaneously with a rise of temperature from 101·6° F. on the previous evening to 108·2°, of the frequency of pulse from 118 to 148, and that of respiration from 22 to 56. The patient was then placed in a bath of 71° F., and affusions of water of the same temperature were made. The mental condition and the appearance of the patient rapidly improved already during the first ten minutes; and at the termination of thirty minutes, when he was removed from the bath, the temperature in the cavity of the mouth was only 101·8°, and further sank during the next half hour to 98·8°; while the patient fell asleep, and began to perspire freely. In the course of the same afternoon the temperature again began to rise rapidly—i.e., from 100·8° at 3 P.M. to 105·8° at 6.40 P.M. Pulse 148; respirations 38; slight delirium. The patient had then another bath with affusion, as in the morning, when the temperature further rose during the first five minutes of the bath to 106·2°, but afterwards fell rapidly, the mercury receding within twenty-five minutes (the duration of the bath) to 101°, and during the following hours to 98°. After the second bath, without any further medicinal or hydrotherapeutic treatment, the disease took the course of a usual mild form of rheumatic fever, leading to perfect recovery, leaving only a rather too long first sound. Dr. Weber repeated the view stated in a former communication to the Society—that the nature of these attacks was the same as in common heat-stroke or insolatio; and thought that the term "hyperpyrexia," as employed by Dr. Wilson Fox, more appropriate than heat-stroke, which conveyed the idea of causation by external heat. Acknowledging that hyperpyrexia was an accident which could occur in all febrile diseases, he maintained that it occurred infinitely more often in rheumatic fever than in any other disease; and, regarding the peculiarities of rheumatic fever, was inclined to ascribe it to the tendency to endocarditis and fibrinous deposits existing in this disease. He suggested that it might have a similar origin as chorea, and might possibly be due to minute embolism, or to plugging of some small vessels in a certain portion of the nervous system, as the hypothetical centre of animal heat and chemical changes. As to prognosis and treatment, he pointed out that all cases formerly had a fatal termination when once the temperature had reached 108° Fahr.; but that the hydrotherapeutic plan, if early and energetically pursued, and with watchfulness as to the possibility of several attacks, gave great promise of a speedy cure, as shown by the two complicated and yet successful cases published by Dr. Wilson Fox, the one by Dr. Meding, and the one by the author.

Dr. GREENHOW related particulars of a case, the subject of which died after treatment by cold affusion. On the fourth day of the acute attack the temperature was 101·5°, and pulse 116. Affusion was tried on the sixth day, the temperature then being 105·2°. Wet sheets were applied at night with temperature of body at 103°, and a reduction was effected to 104°, and subsequently to 101°. The patient then slept quietly for some hours; awoke with a temperature of 107°, and died suddenly the next morning, the heat of the skin being 107° almost immediately before death. He believed, however, that in this instance the treatment had not been fairly tried or properly pursued, and intended to repeat the trial systematically as soon as an opportunity offered.

Dr. ANDREW had never seen such a case, and asked for information as to the therapeutic treatment adopted before hyperpyrexia supervened.

Dr. GREENHOW replied that he was no believer in the mint-water scheme of treatment, and that, according to his knowledge and belief, alkalies were given, and, probably, one or more doses of quinine.

Dr. WILSON FOX thought that hyperpyrexia ought, as a most important subject, to be discussed independently of the treatment adopted, inasmuch as the condition may occur under any circumstances, and under any plan of treatment; that since clinical investigations had been aided by the thermometer, the propriety of cold affusions had been progressively confirmed by facts, and that though we know that in most fevers the course of the disease cannot be shortened, it is equally well known now that a temperature of 108° and upwards indicates a certainly fatal termination. It is therefore the duty of the profession to make known and to practise a plan of treatment that has, under these circumstances, saved the lives of at least five or six patients. Hyperpyrexia may possibly be a phenomenon of acute rheumatism alone; a case of puerperal fever has died under the affusion, and the treatment appears to have been unsuccessful in small-pox. He failed, however, to see how, if cerebral lesions exist, cooling the skin can afford relief.

Dr. ANSTIE, alluding to the existence of hyperpyrexia in diseases other than acute rheumatism, commented upon a fatal case of delirium tremens that had occurred in his own practice, in which the temperature rose to 109°, and so remained until death. A fatal termination was also indicated by a double undulatory pulse-wave shown by the sphygmograph.

Dr. SOUTHEY thought that some stasis in the circulation might be the cause of the high temperature, and that, as the collateral blood-flux must be greatly increased by suppression of circulation through the skin, benefit might take place by the application of cold to the surface.

Dr. A. P. STEWART remarked that a typhoid state sometimes accompanied severe attacks of acute rheumatism, and spoke of a fatal case which occurred with a temperature of 109°, fluid blood being found after death in all cavities and vessels. He thought the plan indicated by Dr. Weber valuable, and worthy of an extended and careful trial.

Dr. C. J. B. WILLIAMS had only met with two fatal cases of acute rheumatism during his career as a hospital physician, thought that much had yet to be ascertained as to hyperpyrexia, and supposed that high temperatures indicated

some affection of the nervous system, commencing at the outset of the disease. He remarked that a temperature of 104° stopped the vital motions of what he had termed "sarcophytes," and was disposed to come to the conclusion either that some change of general constitution has occurred during the last thirty or forty years, or that the condition called hyperpyrexia is due to the mode of treatment adopted.

Dr. WILSON FOX explained that, by a coincidence, Dr. Ringer was recording temperatures with one set of patients, and iron was being prescribed in other cases at the same time for the same disorder, so that the two sets of observations and results accidentally received special prominence.

Dr. WEBER replied briefly, asserting that, according to a series of German statistics most carefully collated, it was shown that treatment by cold affusion diminished the duration of the disease, and reduced mortality.

Reviews and Notices of Books.

Cancerous and other Intra-thoracic Growths, their Natural History and Diagnosis. Being the substance of the Lumleian Lectures delivered before the Royal College of Physicians of London. By J. RISDON BENNETT, M.D., Fellow, Senior Censor, and Representative of the College in the General Medical Council; Consulting Physician to St. Thomas's Hospital, &c. With 5 plates. Small 8vo. pp. 190. London: J. and A. Churchill. 1872.

IT has been stated, and we believe with truth, that at a recent examination for the highest medical degree granted by a certain "crack" university the candidates were, as usual, required to write a commentary upon a case set before them in detail by the examiners. The case, which had to be diagnosed from the physical signs and symptoms given, was one of intra-thoracic tumour, and we believe not one of the candidates made a correct diagnosis. Now, while we quite admit that the diagnosis in such a case is oftentimes beset with difficulties, even when the patient himself is under repeated examination, the fact which we have mentioned is a good illustration of the want of a more extended and precise clinical knowledge on the subject of intra-thoracic growths. The book before us is a very valuable contribution towards this end, from the pen of an able and accomplished physician, who has enjoyed unusual opportunities of studying the history, cause, and pathology of intra-thoracic growths, and who is entitled to speak with great authority on the question.

Dr. Risdon Bennett groups the several varieties of intra-thoracic growths into three classes. The first comprises cases in which cancerous growths, usually in masses varying in size, are disseminated through the lungs, and have more or less analogy with disseminated tubercle, but without inducing any changes in the intervening lung; the second, those in which the cancerous growth is more localised, and leads to important ulterior changes, such as ulceration and gangrene; and the third, those which include mediastinal and other tumours, inducing pressure on the tubes, nerves, and vessels, with its important and very serious consequences. Dr. Bennett gives the clinical history of a number of cases in illustration under these three headings, and makes his comments upon them. He naturally devotes an extended chapter to the third division of his subject, because, as he says, the complications are greater and most numerous; the co-existence of pleuritic effusion often adds greatly to the difficulties of diagnosis, as does also the early occlusion in many cases of the bronchi, by which all respiratory and vocal phenomena are prevented. A fourth section of the work is devoted to concise remarks on non-cancerous intra-thoracic growths. The observations of the author as to temperature go to prove that there is very little pyrexia in slowly advancing cancerous disease, though if the temperature be abnormally high, without other pyrexial symptoms, there is reason for believing either that rapid cell-growth is taking place and the cancer is growing fast, or secondary inflammation has been set up, either from pressure, or some other accidental cause; and hence, as an aid to diagnosis, the thermometer will not give much help in deciding between those cases of miliary or diffused cancerous deposits which, both in their general symptoms and physical signs, most closely simulate acute tubercle. But the book before us contains material calculated to assist the determination of the exact nature of such cases.

It will thus be evident that the book is thoroughly clinical in aim, and of great practical utility, since it is unencumbered with speculative details. A careful perusal of its pages leads us to recommend every practitioner to make himself acquainted with their contents. The book, in fact, is just the kind of work which is suited to the busy practitioner, though it is no less, as can be readily understood, adapted for those who are preparing for clinical examination in medicine. The coloured plates greatly enhance the value of the work.

Notes on Syphilis, with an Appendix on the Unity of the Syphilitic Poison. By S. MESSENGER BRADLEY, F.R.C.S., Lecturer on Comparative Anatomy, Royal School of Medicine and Surgery, Manchester. London: J. and A. Churchill. 1872.

THESE "notes" as they are modestly entitled, are reprinted from the "Manchester Medical and Surgical Reports," and the author has added an appendix containing some separate articles that he had published at different times elsewhere. Mr. Bradley is a believer in the unity of the syphilitic poison, or rather he considers that the indurated chancre with multiple adenopathy, and the soft, suppurating sore with its frequent attendant single bubo, are produced by varieties of one and the same poison. He fully allows that the poison of syphilis has developed into two well-marked varieties, which as a rule "breed true," and that in the immense majority of cases the practised surgeon will be correct in prognosing constitutional immunity in the subjects of some sores, and constitutional infection in the subject of other lesions. But he contends that it is impossible to claim for the soft chancre more than the position of a variety; and he makes some suggestive remarks, which have, however, occurred to the minds of other observers, regarding the well-marked double type into which syphilitic virus has divaricated, as affording an insight into the general evolution of the disease. It is the old question which has been so much debated of late, regarding the difference between species and varieties—the "special creation hypothesis," as opposed to the "evolution hypothesis" of naturalists. Our author has certainly strengthened the position of the "unicists" by the results of some experiments performed by him on animals, from which it would appear that he has been able to produce the local soft variety of sore by inoculating some guinea-pigs and kittens with the virus of the hard one derived from human subjects; and on the other hand, he gives two instances, among numerous experiments followed by negative results only, in which local thickening and constitutional symptoms followed the inoculation of animals with the virus of the hard sore. There are a good many sound and practical remarks in our author's observations on constitutional and hereditary syphilis, and the visceral lesions that are now so generally recognised as the products of syphilis; and the observations on the treatment of this disease and on the employment of mercury are sensible and sound. The author also manifests a considerable acquaintance with the literature of modern syphilographers and pathologists.

Clinical Lectures on Diseases peculiar to Women. By LOMBE ATTHILL, M.D. Univ. Dublin; Fellow and Examiner in Midwifery, King and Queen's College of Physicians; Obstetric Physician to the Adelaide Hospital, Dublin; and formerly Assistant-Physician to the Rotundo Lying-in Hospital. Dublin: Fannin and Co., Grafton-street. London: Longmans, Green and Co. 1871.

THIS excellent little book should have had an earlier notice at our hands. It has three great merits. It treats of very common diseases which are generally very badly taught in our schools; secondly, it treats of them in a thoroughly clinical and practical way; and, finally, without being too short, it is a compact book calculated to be very useful to the practitioner. Dr. Atthill says in his preface that one circumstance which led him to publish his Clinical Lectures was the frequency with which he found even good industrious students unable to give any account of the causes of such a state as menorrhagia. Our practical readers will know what a large share of their practice consists in efforts to relieve the common functional diseases of the uterus, and will be ready to welcome a concise clinical volume principally occupied in discussing such ailments. Dr. Atthill's practice, if not original, is thoroughly independent, and he illustrates it with a copious quotation of good cases. The modes of uterine examination, including the use of the sound, of the various means for dilating the os uteri, of pessaries, &c., are well discussed. We commend the whole book to the careful attention of advanced students and general practitioners, and especially the chapters on Menorrhagia and on the treatment of the various forms of Chronic Inflammation of the Uterus.

Foreign Gleanings.

PECULIAR TREATMENT OF SYPHILITIC IRITIS.

DR. DE MAGRI, of Milan, has treated a series of cases of this kind by injecting calomel into the left arm (*Giornale delle Mal. Veneree*, February, 1872). He usually injects six grains of calomel suspended in glycerine; an abscess, mostly connected with sloughing, forms, and the eye instantly improves. Atropine is, however, freely instilled into the latter, and the improvement is attributed to the powerful counter-irritation exerted in the arm. Even cases of pannus and scrofulous keratitis are thus treated, and with equal success.

Now when it is recollected that it is maintained by some men of experience that atropine alone is sufficient in such cases, the faith in the revulsive action is a little shaken. Then it may be asked whether an abscess excited by other substances than calomel would not be as efficacious; or whether the author supposes that this salt acts on the whole organism. That calomel does good in iritis, whether syphilitic or not, is still believed by those who do not ignore the experience of the past. How much simpler then to give this mercurial chloride by the mouth, and have recourse to simple counter-irritation on the temple, not neglecting atropine. Hypodermic injections are the fashion of the day; they are useful, but they should not, without good reason, take the place of other methods of treatment. So with chloral, which is now tried for almost everything; we have, for example, Dr. Accetella (*L'Independente*, No. 2, 1872), who dresses sores, both primary and tertiary, with a concentrated solution of the hydrate. Some benefit was obtained, but it always remains to be seen whether other and older applications would not have done as well or better.

CHLOROFORM AIDED BY MORPHIA.

Messrs. L'Abbé and Guyon, in a paper offered to the Academy of Sciences of Paris, propose, after experimenting on animals, to inject a solution of morphia before chloroform is inhaled for the purpose of anæsthesia. Claude Bernard has already shown that the narcotic effect of chloroform is obtained more rapidly than usual when combined with morphia. The authors think that the absence of feeling lasts longer with chloroform and morphia, and that the doses of the former may be greatly reduced, much risk being thus avoided. They also consider that the morphia should be used some time before the chloroform is begun, as the injected solution is not very quickly absorbed. Many will probably side with us when we say that it looks rather hazardous to combine such powerful narcotics. Further experiments and the report of the committee appointed to examine the matter will throw some light on the subject; but too much caution cannot be used.

A RAPIDLY FATAL CASE OF CHOLERA IN PARIS.

Professor Bouillaud mentioned, at a late meeting of the Academy of Medicine of Paris (March 5th, 1872), that he observed, ten days before, a rapidly fatal case of Asiatic cholera at the Hôtel Dieu. All the worst symptoms were present: haggard countenance, cyanosis, cold extremities, cramps, sickness, rice-water stools, suppression of urine, loss of voice, and very low temperature (48° in the axilla, and 50° in the rectum). Death took place the same day of the attack, and on examining the intestinal mucous membrane, it was found covered with a vesicular eruption. There was here neither epidemic nor contagious cause; the man resided in Paris, and M. Bouillaud asks, supported by this fact, whether there is really any difference between Asiatic and European cholera.

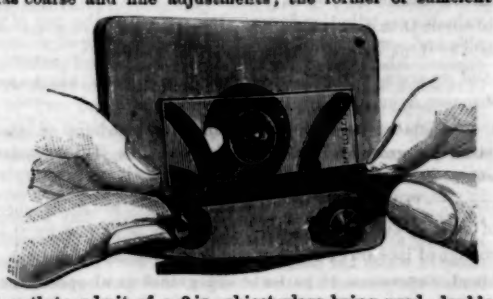
PERFUMED COD-LIVER OIL.

Take of the essence of eucalyptus fifteen minims, cod-liver oil three ounces, and put into a well-corked bottle. The fish-oil thus loses its nauseous taste. For brown oils the quantity of the essence may be increased.

New Inventions.

THE ST. THOMAS'S HOSPITAL MICROSCOPE.

WE have had an opportunity of inspecting one of a number of microscopes recently constructed by Mr. Pillischer, of New Bond-street, for use at St. Thomas's Hospital. The instrument is of excellent workmanship, is moderate in price, and deserves to be generally known. The stand is constructed on the principle of Mr. Pillischer's well-known students' microscopes, but of larger and more massive dimensions; it is very firm and free from vibration, and has coarse and fine adjustments; the former of sufficient



length to admit of a 3 in. object-glass being used, double mirrors, and revolving diaphragm. The stage adapted is of two kinds, one with a sliding fork upon which the object rests, which, with a little practice of fingering, is easily managed; the other is a new and exceedingly ingenious contrivance of the maker. A strip of metal of sufficient width for the object to lie on is connected with two jointed arms; these are screwed to the bottom plate on which they move. At each end of the strip is fixed a small handle, by which the stage can be moved in rectangular directions with perfect ease and accuracy. Considering the simplicity of the mechanism, we are surprised how well the object keeps in focus under a high power. We have tested the ⅛ in. object glass which is supplied with this microscope, and found it to be of excellent quality both as regards magnifying power and definition. We understand that the microscope, as supplied to St. Thomas's Hospital, cost £5, or, with the addition of a binocular arrangement, polarising, and a quantity of other useful apparatus, £10 10s.

THE LANCET.

LONDON: SATURDAY, MARCH 23, 1872.

THE relation between Medicine as discoursed upon in the College of Physicians and as practised in the sick-room, is brought to our mind by the lectures of which we publish abstracts to-day, delivered respectively by Dr. QUAIN and Dr. BRISTOWE. The general practitioner, hard pressed by the actual urgencies of suffering, is apt sometimes to think that there is little in common between him and the philosophical physician who strives after definitions and becomes almost enamoured of diseased processes, as he sees in them so much of physiology and often such a *nisus* towards health. In the College of Physicians he is apt to feel that there is too much love of generalities and generalisations; whereas in medical practice there is a wonderful individuality about cases of disease: one case is so unlike others, either in its nature or in its accidental associations and peculiarities, that medical practice is apt to appear to the practitioner as a collection of personal cases, in which the idiosyncrasies of the patient count for as much as the doctrines of pathology. The study of patients is a very different thing from the study of disease. It is not uncommon to meet men who seem to have the faculty of relieving and benefiting particular persons in a high degree by dint of much familiarity with their peculiarities of health and temperament, and yet who would be very much at fault if they were subjected to an examination in the latest doctrines concerning neoplasms, phthinoplasms, or thermometry. It is only just to this class of practitioners to admit that even philosophical physicians have come of late to think more of the patient if not less of the disease. And we are sure that a great deal of new truth has to be discovered, or, at any rate, has to have a new and very important statement, as to the bearing of the patient on diseased processes—in other words, of the bearing of individual life and constitution on particular pathological processes. The moral of all this is, that a perfect knowledge of disease and its treatment is only to be gained by the combined labours of colleges and practitioners, by the combined observation of patients and pathological specimens and states. It follows that the duty and wisdom of practitioners is, while condemning no patient prematurely on mere abstract principles of pathology, to acquaint himself as closely as possible with these; and that it is the duty of physicians to check the tendency to generalise and formulate doctrine by much reference to actual and well-ascertained cases of disease. The hospital physician and the general practitioner have very different opportunities of viewing disease. The latter sees the case over a period of years or over a lifetime, and can trace the relation of symptoms widely separated in point of time and of appearance. As we have said, he is confronted with the patient as a whole, and not only with particular groups of nosological phenomena. The hospital or consulting physician, on the other hand, sees and knows little of the patient. He looks upon him as the embodiment of certain symptoms and pathological signs, and his acquaintance with the patient is necessarily slight and temporary. This disadvantage is greater in regard to the more chronic class of cases. And when it is considered how largely medical practice is composed of these, how little really acute disease there is in it, how much it has to do with processes of degeneration, of almost "unperceived decay," we can imagine how great is the advantage of the general over the consulting practitioner. And it might be much greater still if the general practitioner would fully utilise all his opportunities. But, in point of fact, he is hindered by his very advantages. There naturally arise between him and his patient human and social feelings, which make it more and more difficult and disagreeable for him to regard the patient as a mere pathological specimen. He turns a blindish eye to the bad side of his case. From the beginning he looks upon him as needing to be cured rather than studied; and he almost feels angry with the perfections of diagnosis when they shut him up to the conclusion that his patient has an organic fault.

Still practitioners require, for their own peace and the benefit of their patients, to study disease from the doctrinal as well as the curative side; and there is no excuse for their not doing so, when they see in the labours of the best pathologists a desire to be practical and to promote therapeutical ends. In such lectures as those we publish abstracts of to-day we see the practical bearings of pathological doctrine. Dr. QUAIN, in his Lumleian Lectures, working in a seam which he has enriched, develops the pathology of disease of the cardiac muscular walls, and differentiates various kinds of hypertrophy, according to the tissue affected, and according to the cause. He shows that a number of conditions other than valvular disease induce hypertrophy; that the increased tissue may either be of the nature of muscle or of connective tissue. A common form of simple hypertrophy, according to Dr. QUAIN, is due to chronic inflammation or myocarditis, leading to hypertrophy of connective tissue. Dr. QUAIN naturally insists on the importance of such distinctions as laying the basis of a sounder treatment. It is refreshing to hear a physician who has so ably devoted himself to heart disease suggest the therapeutical advantages of his study, and, with a modesty rare in pathologists, say that he has less faith in himself than in his drugs.

In Dr. BRISTOWE's lectures there are many statements in regard to therapeutics which medical practitioners will demur to, though, on the whole, his reasoning in regard to pathological processes and their tendency is sound. He seems too sceptical as to the value of drugs. At any rate, despite Sir WILLIAM GULL's and Dr. SUTTON's experience, we are of opinion that the suffering, duration, and danger of rheumatic fever may be lessened by treatment, though it is only fair to admit that they may all be increased by bad treatment. Dr. BENNETT would not allow that his splendidly successful treatment of pneumonia was simply "expectant." We must question the justice of Dr. BRISTOWE's want of faith in diuretics, which he seems to think do not remove general dropsy because they do not remove localised accu-

mulations. This is a mode of reasoning which is not proper to the case, and leads to conclusions inconsistent with facts, for surely most of us have seen an anasarca dispersed by blue-pill, squill, and digitalis. Again, few general practitioners will admit that the treatment of chorea is altogether illusory. Statements of this kind have a very discouraging effect, and should be a little more specific. In spite of them, we are firmly convinced of the advantages of drugs in chorea. We agree fully with Dr. BRISTOWE in his praise of hygiene; but surely it is possible to magnify hygiene without disparaging medicine proper. The greatest amount of hygiene will not compare with quinine in ague, or with opium in agony, or with iodide of potassium in nodes.

WE regret that the hope which we recently expressed that Mr. STANSFELD'S Bill would be found to contain an adequate provision for returns of sickness has not been realised. One clause in the Bill (61) is devoted to this subject, and it appears to us not only altogether insufficient for the purpose, but to involve a serious practical difficulty should it become law. The clause enacts that it shall be the duty of medical officers of health to make returns "of sickness under treatment in or in connexion with any institutions within their respective districts established for the treatment of the sick, and maintained wholly or partly by voluntary subscriptions, or by endowments or grants from the Consolidated Fund, or by local rates"; and to enable them to do this, the trustees, governors, managers, and officers respectively of any such institutions "shall furnish to such medical officers of health all reasonable and needful assistance in the preparation of such returns." How it can ever have been conceived possible that such a provision as this would be in the least likely to work satisfactorily is to us a marvel. We can understand that many hospital authorities would be willing to make returns of a simple character voluntarily to a central office, and possibly also to a local medical officer of health; and of course they may be required by law to make such returns *nolens volens*, though we doubt if Parliament would compel them to do so without remuneration. But this is quite different from saying that hospital authorities shall submit to have their books overhauled by a local medical officer of health, and be compelled to give him "all reasonable and needful assistance" in completing the information he wants. There is a vague elasticity about this wording, which, if introduced into an Act, would infallibly become a bone of contention whenever put into operation. The clause altogether appears to us to betray an absence of definite purpose in its origin; and we trust that before the Bill goes into committee, or during its progress through that stage, Mr. STANSFELD will have had time to consider the subject of sickness returns a little more closely than he appears to have previously done, and will be prepared to amend his proposals in that respect. We warn him especially that, unless he wishes to confront the hostility of the entire medical profession, he must provide for payment to the contributors of these sickness returns, whether they be Poor-law medical officers or the officers of medical charities. Sir CHARLES ADDERLEY'S Bill, recognising the principle that a system of sickness returns is a matter of national concern, proposes that the contributors shall receive "such payments as the Treasury shall approve in order to defray the expenses of preparing and furnishing" the necessary returns. A similar provision should have been made in the Government Bill; and we earnestly press upon the attention of the profession the extreme importance of bringing all the influence they can muster in Parliament to bear upon the attainment of this object. The country is not so poor as to need further gratuitous services from a class who do more than enough that way already.

IN a capital but short address, the President of the Royal Microscopical Society (Mr. W. K. PARKER), one of our most able and original microscopical observers, makes some interesting remarks on the fall of transcendental anatomy, and the advances that have been made during the last few years in the views entertained in regard to the organisation of the vertebrata. "Thirty years ago," he says, "my favourite author in these matters was Sir CHARLES BELL, a good type of the PALEY or *Fitness* school. Such good reverential men loved to trace the handiwork of an infinitely clever Contriver, who brought organisms into being in a moment—monads or whales,—the plan of each having been perfected beforehand by a mode of thought peculiarly human. Looking from another standpoint, and yet as reverent as they, I have no quarrel even now with this school. They but saw and understood things in an *ex parte* manner, pleased with a fitness, delighted with a plan." The deeper meanings that exist in the vertebrate organisation had already, however, been seized by the many-sided genius of GOETHE and by OKEN, and their views were warmly advocated and greatly developed by OWEN. Mr. PARKER says rightly he could have wished that the transcendentalism "which grew out of these oblique glimpses, partial and fitful in the dawn of a new era of biological science, had never reached our shores, and that we had passed direct from the labours of the great gradationist, CUVIER, to those of the German embryologists, BAER, REICHERT, and RATHKE." It is to the incomparable labours of these men that a deep and wide foundation was laid for a true morphological knowledge of the vertebrata. As SOCRATES was accused of corrupting the youth of Athens by questioning the truth of received axioms, so Mr. PARKER contends OWEN may be accused of misleading students, though in an opposite direction—namely, "by dispelling wholesome doubts, by interpreting all the hard sentences of nature for them, and by holding before their charmed vision an archetypal idea, instead of setting them to work at the various types with scalpel and lens and microscope." Professor OWEN'S inductions, he maintains, were made from particulars far too few on which to build so stupendous a theory, and meantime the whole life-history of no single type had been worked out. The facts all fitted, and fitted beautifully: a reason was given for everything; and two laws governed the creation of all the modifications of the exemplar—namely, homology and teleology; when homology failed, then teleology came to the rescue.

The merit of the formation in this country of a new school of comparative anatomy, founded on the study of embryology, must be given to Professor HUXLEY; but

perhaps Mr. PARKER is himself as eminent an example of the advances that may be made by an appeal to nature in this direction as his better known fellow-worker. Mr PARKER has, with infinite labour, worked out the development of the bones of the head in the chick, frog, and salmon, from their earliest appearance, in the most admirable manner. Such work is laborious in the extreme; it requires the nicest and most delicate dissection, the utmost patience on the part of the observer, good general knowledge of other types than the one under observation to enable homologies to be recognised and analogies to be traced, and, lastly, repeated confirmation of the same fact in order that correct conclusions may be drawn. It can, however, as Mr. PARKER remarks, be conducted with low powers; it requires no expensive apparatus, nor any extraordinary skill or experience in microscopical research. We must refer those who wish to see what can be done with a few simple instruments, a seeing eye, and an understanding mind, to follow his last paper in the Philosophical Transactions on the Development of the Frog's Head.

THE almost simultaneous death of Inspector-General ANDERSON and retirement of Sir DAVID DEAS, which we announced last week, have caused a move in the upper rank of the naval medical service, which had been stagnant for nearly three years. The active list of inspectors-general will now be reduced to its fixed complement of four; but as, unfortunately, there are at present (since the abolition of Greenwich Hospital) but two appointments for inspectors, it follows that Dr. SMART, C.B., is still kept unemployed, notwithstanding his great service-claims, and that the deputy inspector who may be thought worthy of promotion will also have to go on half-pay.

Who the fortunate officer selected for promotion may be we are not in a position as yet to announce. Deputy Inspector MASON, C.B., has recently served at Haslar with distinction, and has just been appointed to the Bermuda Hospital. Dr. H. J. DOMVILLE, C.B., also stands high in the estimation of his professional brethren, and has discharged the quasi-inspectorial duties of chief of the Chatham Infirmary for nearly three years with great success. We could readily believe that the authorities would gladly mark their appreciation of the important services rendered to the entire department by the officer next on the list, Dr. ALEXANDER MACKAY, who, as head of the statistical department of naval medicine, has done so much to recognise honest work on the part of medical officers scattered over the globe. It happens, however, that Dr. MACKAY has not had the opportunity of complying with the very salutary regulation which requires that a deputy inspector shall have been for three years in charge of a naval hospital before gaining promotion; but we doubt not that the authorities will discover some other available method of recognising this gentleman's services.

The promotion of a deputy inspector will, of course, lead to the immediate promotion of a staff surgeon, and where so many good men have claims from seniority and service, it would be invidious to mention names. There can be no doubt that, in the selection for these appointments, the Director-General will have the good of the service strictly in view.

Medical Annotations.

"Ne quid nimis."

LIFE ASSURANCE.

MEDICAL PRACTITIONERS, beyond every other class of the community, recognise the value of life assurance. They witness the dismay which occurs in families when the chief worker is struck down by death, before any adequate provision has been made for the survivors, and when a life policy has not been secured. Although medical men, as a class, are life-assurers, it too often happens, even with them, that in the case of death before middle age, those dear to them are left in comparative helplessness and poverty. It may be truly said that when seized by illness no man is more nervous about himself than the doctor. He knows, beyond other men, how easily trifling ailments may glide on to tragic ends. Nothing steadies his mind under such circumstances so completely, as the reflection that in the worst event he has not neglected the making of such provision for his belongings as lay in his power. Life assurance, without doubt, offers the best, and in many cases the only remedy for the unfavourable contingencies to which medical men are liable. They, almost more than any other class, carry their chief capital in their brain, and as soon as the latter is silent, the former ceases to exist.

It becomes, therefore, an enormous blessing that at an age when the man in practice begins to feel the responsibilities of family, and is usually well started in the race of life, he can by insuring in a sound office, say at the age of thirty to thirty-five, for a premium of about £25 a year secure £1000 at death. The payment of this may be quarterly, half-yearly, or annual; or, for the first five years, when payments are least easy, he may pay half the annual premiums, leaving the rest as a loan on the policy, payable only when it becomes a claim. From the moment of the first payment, the sum assured is as much his own to dispose of in case of death, as though it had been lodged at his banker's. He even gets interest for the premiums, in the shape of bonuses added to his policy, while he lives. Thus he can secure in a day, what would take years of anxious toil to effect by the slow processes of saving and laying by.

In the progress of life assurance it has happened that different offices have become associated with special classes and professions. This is particularly the case with the Church, the Law, and Medicine—though our own was the last profession to form this connexion. Such offices are among the most flourishing which exist. In another page we publish the eighteenth annual report of one of our great offices—the Briton Medical and General. This Association, it is well known, was united some ten years since with the New Equitable, an office founded by the late Mr. Wakley, of which it may not be out of place to say a few words.

When that office was started in 1851, it was to enforce fair payment for the reports medical men were called upon to furnish as the very basis of life assurance. Those who are old enough will remember the battle fought in these pages on the subject. When argument was exhausted, nothing but practical enforcement of the principle remained. This was done most effectually by the New Equitable. At the time of its projection the life offices paying medical men for their reports might have been counted on the fingers of one hand. Now, we believe, every office in the kingdom pays these fees, and there are about 100 life assurance companies in existence in this country. Besides the triumph of justice, an enormous pecuniary benefit has been conferred on the

profession, and it is to the office now represented by the Briton that this is largely owing. This, indeed, is the bond which exists between the Briton Medical Life Office and the profession. We have been favoured with some facts which, without saying anything derogatory of other medical life offices, will show the claims of the Briton to the suffrages of medical men, and how far they are recognised. The total number of shares issued by the company is 17,820. Of these, 2645, of £10 each, are held by medical practitioners. No less than 1314 medical men hold policies in the company. With regard to medical fees, we believe the scale of payment to be among the most liberal, if not the highest paid by any office. The sum we are about to quote will show, on a large scale, the results as between this office and the medical profession. It demonstrates the liberality of the Briton, and the enormous boon, considering the amount which must be paid to medical men by life offices collectively, which has been conferred on the profession by the universal adoption of the principle of payment for medical reports. It must never be forgotten that before its adoption life assurance was a positive injury to the profession. Medical men frequently lost their patients by writing true reports, which led to the rejection or loading of lives. The amount of medical fees paid by the Briton Medical and General Life Association for reports on lives during ten years ending 1871 reached the large sum of £32,437 19*s.* 9*d.*, or more than £3000 per annum!

There is another point of some importance with reference to the beneficial connexion between an office like the Briton and the medical profession. The utmost liberality is shown by the directors towards its medical assurers. We refer especially to paying the surrender value of policies; a revival of the same, when lapsed from accidental causes; to loans on policies, and also loans on real and personal security. We believe that during the twenty-one years which have elapsed since the establishment of the New Equitable, and its successor, the Briton, many young professional men, now in good position and practice, have owed their first start in life to loans obtained from these offices.

The aggregate amount now paid to members of the medical profession in life assurance fees must be enormous; far exceeding annually the incomes of all our medical charities put together. We will not prolong our remarks. We have said enough to show that the interests of the profession, and of an insurance office like the Briton, are in many respects identical. As regards the all-important subjects of soundness and responsibility, life offices are now, thanks to the Bill of Mr. Cave, obliged to publish an annual financial statement in set forms, from which there is no escape. The financial statement of the Briton will be found on another page, and can be studied by our readers with advantage. We are informed that in the most essential point of all—namely, new business of the year—it stands in the front rank amongst British life offices. We conclude with the obvious truism, that every medical man in the kingdom ought to be an insurer and a promoter of life assurance. *Nemo sibi vivat.*

DEGREES AND "DEGREES."

UNDER the above title the Rev. Henry Belcher, M.A., has published a pamphlet on the subject of spurious degrees, which possesses as much interest for the medical as for the clerical profession. The author's object is to "show up" those American and German degrees which are conferred *in absentiâ* upon persons who are foolish enough to part with the requisite amount of cash in return for a perfectly valueless piece of parchment. He shows that many of the so-called American universities have really no existence; and that with regard to the notorious Philadelphia University of Medicine and Surgery, for which a charter was procured in some unaccountable way from the Washington Legislature, it can only be said that it has a building which appears to be of the quack-museum order; but that its appliances for teaching and examining are absolutely *nil*. A facsimile of one of the diplomas issued by this precious University is appended to Mr. Belcher's pamphlet, so that it may become more generally known and appreciated.

The existence of this and similar pseudo-institutions in Philadelphia is the more to be deplored because there is there a veritable and most respectable University of Pennsylvania, which has existed for over a hundred and twenty years, and has sent out numbers of well-qualified graduates. During the last session it numbered 759 students, of whom 375 were studying medicine. The University of Pennsylvania does all it can to stop the traffic in false diplomas; and during last autumn advertised in the Glasgow papers extracts from its statutes in order to convince numerous correspondents that the University cannot confer degrees *in absentiâ*. The Senate and House of Representatives of Pennsylvania also passed an Act last year prohibiting the sale of academic degrees under a penalty; but this does not appear to have much force.

The clerical, medical, and tutorial professions seem to furnish the great bulk of the fools or knaves who purchase these spurious degrees and adorn their names with doctorates in divinity, medicine, and philosophy. The clergy of the Established Church at least have, however, one advantage over their brethren in the fact that they can exhibit the outward sign of a degree over their canonicals in the form of a "hood." Mr. Belcher is very learned in the origin, uses, and "cut" of hoods, and says that the Oxford M.A. is the most envied adornment because of its crimson lining. The Philadelphian graduates have calmly copied this, and one of their number has accordingly been gibbeted in full canonicals on the frontispiece of Mr. Belcher's pamphlet. It is fortunate, perhaps, that medical men have so few opportunities of showing off their colours true or false.

Mr. Belcher dates from King's College, London, having dedicated his book to the principal of that college, and he is rather hard upon certain "literate persons from Islington" who wear a "very rich-looking black silk hood," and upon other "literate persons from St. Asphalte's, an admirable school of divinity in the north," who wear the Oxford hood without having a degree. He will perhaps pardon us for directing his attention to the Theological Associates of King's College, who are permitted by their Principal to wear a hood which also does not imply the possession of a degree.

TELLURIC POISONING.

THE sanitary measures now taken to restore its pristine salubrity to the Campagna are fraught with interest to the physician all the world over. In the first place, the question is being asked, What is the true cause of the unhealthiness of that famous tract? How did it lapse from the smiling district of ancient Rome, whence the republic drew its best soldiers, into the desolate and pestiferous plain that it has since become? Attempts without number have been made to answer this question, from the great Roman physician, Lancisi, downwards. According to that authority, the exhalation from subterranean sheets of water, as well as from the Pomptine marshes, produces the malarious fever with which Rome is haunted. This view, with slight modifications, has been the prevailing one; but the recent work of M. Léon Colin, of the Val-de-Grâce, is an elaborate demonstration that marshy vapour has little or

nothing to do with the phenomenon. Fever of precisely the same type is found in Algeria, in the Sahara, where there is neither water to exhale nor vegetation to putresce, and even in those European countries where extensive tracts of soil have been turned up for railway and canal works. The true cause of the Roman, as of all similar fevers, he finds in a so-called "telluric poison," proceeding from the vegetative energy of the soil when that energy is not taken up and absorbed by its natural consumers, crops or plants. The undoubted connexion between marshy districts and malaria he would explain quite differently from Lancisi. Marshes are at their maximum of noxiousness when, by desiccation, there comes in contact with the atmosphere a considerable part of the immersed ground, and when, in consequence, there is exposed a soil of enormous vegetative energy, which, hitherto kept under water, has accumulated for generations the elements of that energy. This "intoxication tellurique" is rendered more or less active by three special conditions: first, the configuration and constitution of the soil; secondly, the atmospheric influence; thirdly, the resistance, more or less great, offered by human beings according to their aggregation in communities, or according to their isolation—the social conditions, in fact. These modifying influences occupy a considerable share of M. Colin's most acute and interesting work. The practical upshot of his researches into the malaria of the Campagna is this: that cultivation, systematic and scientific, is the true antidote to the fever; and that, if conducted on sound principles, the enterprise would result in restoring the ancient fertility of the plain, and converting into flourishing farms the waste tract now covered with the scantiest and poorest coating of herbage. The Italian Government is composed of men by no means wanting in the intelligence to perceive, and the energy to act upon, M. Colin's suggestions; and we have little doubt that in a few years Rome, so far from being habitable by foreign visitors for certain months only, will be as salubrious a residence in July and August as it is in November or at Christmas. The city itself will benefit from the work in even a moral point of view;—the unutilised energy of the inhabitants, which so often exploded in revolution, or exhaled in disaffection, being taken up and absorbed by its appropriate pabulum, and ceasing, like that "intoxication tellurique," to exercise any noxious influence by being turned to its legitimate account.

A STAGNANT SERVICE.

MR. CARDWELL, in his late speech on the Army Bill, adverted to the question of stagnation of promotion in the Royal Artillery and Royal Engineers, and declared it had been long evident that something must be done to give better promotion in those corps; but he made no allusion to the present condition of the Army Medical Department. Before the Crimean war, and up to 1859 and 1860, assistant-surgeons got promoted to the rank of surgeon in from seven to nine years, and many even got the step after five years. There are now assistant-surgeons on the list with over fourteen years' service; and the prospect, as regards the remainder, so far from improving, looks even worse. There is no better indication of the way in which the British medical service is regarded at the present time by the class of men whom we should be glad to see in it than that recently afforded by an officer at Netley having resigned his commission in the British for the chance of obtaining one in the Indian medical service. Whether we look at the Naval or the Indian Medical Departments, no one can help being struck with the enormous disproportion between the numbers in the grade of assistant-surgeon, as compared with that of surgeon, in the medical service of the British army. There are no less than 633 assistant-surgeons to 235 surgeons in the latter service. Mr. Cardwell is now intent on reorganising the military forces of the country, and the present is, therefore, a fitting opportunity for introducing some measure for relieving the stagnation that exists as regards the promotion of army medical officers. Twelve years' service gives an assistant-surgeon in the Indian medical service a title to promotion, and the two departments should at least be put on the same footing in this respect.

MILITIA SURGEONS.

CONSIDERING the opinion we expressed last week, we are very glad to notice that the statements lately made by the Secretary of State for War regarding militia surgeons is not to pass unchallenged. Under the new regulations, the militia surgeons not being allowed to examine recruits, to give medical attendance to the permanent staff, or to attend the preliminary drill of the recruits, from which services the principal part of their pay has hitherto been derived, Sir Edward Lacon will ask Mr. Cardwell in what way he proposes to remunerate them? especially as many of the surgeons have partially or wholly abandoned private practice to enable them to perform their militia duties. How is it that members of the medical profession so often fail to receive from a Liberal Government the consideration due to them?

THE MEDICAL BEARINGS OF THE MASTER AND SERVANT (WAGES) BILL.

A LETTER in THE LANCET of last week directed attention to one of the bearings of the Master and Servant (Wages) Bill which was probably not contemplated by its promoters, and which it is to be hoped will lead to a slight modification of the measure as it passes through the House of Commons. There can be but one opinion as to the iniquitous truck system, by which men are paid their wages, not in money, but in goods, over the quality of which they have no control. Their dependence is the greater as their wages are paid at long intervals, during which they have to live on credit on the truck system. Mr. Winterbotham deserves praise for trying to make illegal a system of payment by which the most dependent class of men receive far less wages than they are supposed to receive. But, as the Bill stands, it may have the effect of making it illegal in masters to retain a small sum for the purposes of medical attendance or sick assurance—an arrangement very common in manufacturing and colliery districts, which is very popular with workmen, and secures immediate and efficient medical attention to them in case of accident or sickness. It is certain that great harm will be done both to workmen and medical men if a system which works so well is not to have, as it has hitherto had, the sanction of law. On all sides we are trying to encourage providence and forethought in regard to sickness. In many districts such virtues have long been exercised by workmen and their employers in securing a system of medical attendance. We trust that Mr. Winterbotham will see that his Bill does not interfere with this system.

GUY'S HOSPITAL BIENNIAL FESTIVAL.

THIS meeting took place on March 15th, at Willis's Rooms. Some few guests were invited, including the President, Treasurer, and Chaplain of Guy's Hospital; the Presidents of the Royal College of Physicians and Surgeons, and the Master of the Apothecaries, Company; Lieut.-Col. Beresford, M.P. for the borough, Mr. J. Locke, M.P., and Mr. Amphlett, Q.C., M.P. for Worcestershire. The toast of the evening was "Success to the School of Medicine and

Surgery attached to Guy's Hospital." The toasts of the consulting and acting members of the medical and surgical staff, and the teachers in the School of Guy's Hospital, were received with great applause, and the reception of Mr. Cook, Dr. Owen Rees, Sir W. W. Gull, and Mr. Birkett, must have been flattering to each of those gentlemen.

Two things added greatly to the success of the meeting. The first was the admirable arrangements of the hon. secretary, Mr. Durham, by which every man was placed amongst his own friends. The other was the singing of the gentlemen of the Guy's Glee Club, who, entering thoroughly into the spirit of the gathering, acquitted themselves admirably, and excited more than usual interest.

A GOOD EXAMPLE.

A DONATION of £50 was lately presented to the authorities of University College Hospital under circumstances that call for special comment. In the beginning of January last, a slate billiard-table maker, in assisting to unload slabs from a truck, was "jammed" against the side of the vehicle by the falling of one of these slabs (weighing between four and five tons), and both his legs were fractured. He was removed to University College Hospital, where the right leg was amputated on the 25th of January, and the left on the 2nd inst. He has since that time progressed favourably, and has returned home, and his son and friends have presented this sum to the funds of the hospital in acknowledgment "of the unwearied attention and kindness shown by the surgeons and by all in connexion with the ward." Bread-winning in London at any ordinary trade is not often done easily, and we may presume that billiard-table makers are no exception to the rule. Having regard to this fact, the gift above mentioned should be classed as among the most munificent donations of the year. Hospitals wholly dependent on charitable contributions would flourish if they were enabled to record more such tangible evidences of gratitude for "benefits received," instead of the thousand and one impalpable but not less distinct evidences of "benefits forgot."

FRIENDLY SOCIETIES AND PROVIDENT DISPENSARIES.

A VERY important question has been started at Plymouth. The Court "Hearts of Oak" of the Ancient Order of Foresters desire that its members should in a body join the Plymouth Provident Dispensary. We gather from an account in the *Western Daily Mercury* of an interview between a deputation from the Court of Foresters and the committee and medical staff of the Dispensary that they hardly contemplated joining upon present arrangements. The members of the Dispensary pay 13*d.* a quarter, and the members of the Court only pay 9*d.* for medical attendance. The Foresters seemed to think that, in consideration of their numbers and influence, and of the fact that their payments would be collected inexpensively by their own officers, they might be received at something less than ordinary members. They sought connexion with the Dispensary on the ground that they would have a larger choice of medical advisers than under the present system of one medical man for a whole lodge or club. Though not proposing immediately to ask for attendance on their wives and children, they intimated that they would be glad to have the advantages of the Provident Dispensary system extended to them. On the side of the Dispensary some objections were suggested: as that it was meant for a poorer class of persons than the Foresters; that its medical officers only attended members within the borough, whereas a Forester could claim attendance within an area of three miles; that it would be difficult to take the club without an examination of individual members. Notwithstanding, it was unanimously agreed that the members of the Court should be admitted to the Dispensary on the ordinary terms. The deputation seemed pleased with the attention given to their proposal, and thanked the committee and staff. The whole discussion was characterised by much good sense and good feeling, and was creditable to both sides.

This is an entirely new field of work for Provident Dispensaries, and there is no experience to guide parties. But with such reasonableness as was displayed at Plymouth there will be no insuperable difficulties. We think that overtures from provident men like Foresters and Oddfellows, who number nearly a million in England (none of whose members at Plymouth receive more than 40*s.* a week), should be received in a generous spirit, without being too particular as to a stray member whose means or position may be exceptionally good. We do not see that they should be received for less than the ordinary members. They are at least as able to pay, and they like to be well attended to. We must not, however, be understood as expressing approval of the amount paid for medical attendance by the Foresters, or even by the Dispensary. On the contrary, the sums seem to us unreasonably small.

SHALL MEASLES BE TREATED IN THE PUBLIC HOSPITALS?

THE Committee of the Homerton Fever Hospital have complained that the parish officers have sent in cases of measles under the certificate of its being an infectious fever. It is so; but there can be no doubt whatever that the Legislature had no intention of providing for the reception of such cases in the metropolitan hospitals, and we agree with Dr. Bridges as to the impropriety of mixing up measles with other infectious fevers, and of its being sent to hospital at all. In the first place, uncomplicated measles is a very harmless disease which may be very well treated at home; whilst if complicated with pneumonia or diarrhœa its danger would only be increased by admission to a hospital in which the majority of patients are labouring under typhus, enteric, or scarlet fevers. Moreover, it would be practically ruinous to provide the hospital accommodation and proper attendance which would be required during an epidemic of measles, even if the mothers would allow their children to be removed. Considering also the number of young children affected, we conceive any advantage of hospital administration would be more than counterbalanced by the absence of the mother's care, and, in the case of infants, of the mother's breast. Lastly, we may note that whilst there is in the army a general direction that all cases of infectious fever shall be at once admitted to hospital, measles is excepted.

We can have no doubt that the Metropolitan Asylums Board will do well to follow Dr. Bridges' advice, and refuse the charge sought to be put upon them.

THE RECTORSHIP OF ST. ANDREWS UNIVERSITY.

AT a meeting of the Senatus of St. Andrews University, held on Wednesday, the 14th inst., a letter was read from Mr. Ruskin, in which that gentleman resigned his claims to the Rectorship. The Senatus will now hold a new election on Thursday, the 28th inst.

A meeting of students was held on the 20th inst. in order to nominate candidates for the rectorship, Mr. John Robb presiding. Mr. Alexander Gibson proposed Professor Huxley, and remarked they had been represented by a philosopher, John Stuart Mill; by an historian, James

Anthony Froude; and that they should now have a man of physical science. Mr. John Black seconded the nomination. No other candidate being proposed, the meeting adjourned *sine die*. Among those mentioned for the office are the Marquis of Salisbury, Sir Roundell Palmer, Lord Neaves, George Macdonald, the novelist, and Robert Browning, the poet.

LEITH HOSPITAL.

AT the annual meeting of the subscribers to this charity, the directors reported that provision had been made for small-pox cases, acute and convalescent, beyond the precincts of the hospital, while fever cases had extra accommodation provided them within it. A requisition praying for admission of ladies into the hospital with a view to clinical instruction was, in the meantime, voted inexpedient. Legacies having been munificently bequeathed to the hospital, the directors will immediately consider how these can be most advantageously utilised for the accommodation and treatment of the constantly increasing patients. A statement of the cases treated in 1870 and 1871, showing a total of 8554 for the former year and of 7863 for the latter, concluded the report, which further showed that the death-rate among fever cases for the two years was 1 in 13·6, including the small-pox patients; excluding these, the mortality from fever was 1 in 19.

THE GOVERNMENT AND MEDICAL REFORM.

DR. LUSH asked the Vice-President of the Council, on Thursday night, if it was his intention, during the present session, to introduce a Bill for the Amendment of the Medical Act, 1858. Mr. Forster replied that he understood that the English licensing bodies had nearly succeeded in instituting a Conjoint Examining Board, and he intimated that the Government would take no steps in the matter at present, but that it would watch what was being done by the Scotch and Irish bodies before next session.

THE ENGLISH CONJOINT EXAMINATION SCHEME.

THE Joint Committee of the Royal College of Physicians and Surgeons of England met on Monday last, but, as no official communication had been received from the General Medical Council on the subject of a conjoint examining board for England, the committee adjourned without transacting any business.

THERE appears to be some unusual delay in the appointment of a successor to Dr. W. S. Playfair, who, until his promotion to the post of physician-accoucheur, held the office of assistant-physician for diseases of women and children at King's College Hospital. We are informed that the rules relating to the duties of the office are about to be revised by the Medical Board. If such be the case, it is better to make known the fact openly, inasmuch as delays are dangerous in these matters, particularly in the case of an institution not famed for keeping at her side those that she has reared most successfully.

IN Adelaide, South Australia, the heat during part of January is stated to have been intense. For twelve days the thermometer fell very little below 82°, and ranged in the day up to 108° in the shade. The temperature of the water supplied by the town-works rose to 79°. The houses got so thoroughly heated that the male portion of the community generally slept outside. Business was almost brought to a stand-still, and there was a complete exodus of those who could afford to leave towards the seaside.

THE late Mr. Broderip having expressed a wish that the greater part of his paintings and various works of art should be sold, and the profits handed over to the Middlesex Hospital, a sale took place in February, which realised £20,000. This sum, in Brazilian four-and-half per cent. bonds, is now ready to be handed to the institution. It will be remembered that the late Mr. Broderip had in his life-time given a similar munificent donation.

SCOTLAND still maintains a high rate of mortality. In February the deaths registered in the eight principal towns were 2780, which would, after making allowance for increased population, be 105 in excess of the previous ten years' average. In Leith above a third of all the deaths were from small-pox. Whooping-cough appears to have been very fatal in Glasgow; 155 deaths from this epidemic being recorded.

THE accounts of the last Hospital Sunday at Newcastle-upon-Tyne have just been made up, and the proceeds (net £1770) divided as follows:—Infirmary, £1003; Dispensary, £232; Convalescent Home, £212; Hospital for Sick Children, £102; Gateshead Dispensary, £102; and about £100 among the remaining smaller medical charities. The total sum collected was £1908 4*s.* 9*d.*

DR. VIRCHOW, of Berlin, has issued an indignant protest against the paltry spirit displayed by the learned bodies of France in expunging from their rolls all corresponding members who happen to be Germans. He calls upon his countrymen to make no reprisals, but to respect, as they have hitherto done, the catholicity of science—"Omne solum docto patria."

THERE was a disturbance at the School of Medicine in Paris on Wednesday, the students preventing Professor Dolbeau from giving a lecture by incessant clamour. After great uproar the professor withdrew by a side-door. The students believe that M. Dolbeau gave evidence against some of the Communists.

AT the Clerkenwell Police-court on Tuesday three persons were fined for receiving lodgers in unregistered houses, which were said to be in a most filthy condition, with little or no ventilation. One only was able to pay the fine, and the others were sent to prison.

THE Registrar-General in his Annual Summary of the Weekly Returns, just issued, mentions as a satisfactory sign of the improving sanitary condition of the metropolis that the deaths referred to different forms of fever have steadily declined from 3689 in 1864 to 1746 last year.

BEFORE H.M.S. *Daphne* left Calcutta with the remains of Lord Mayo cholera broke out on board and a sub-lieutenant died. The captain, assistant-surgeon, and several men were also attacked, but by the latest accounts they are now doing well.

HIS Excellency the French Ambassador has just presented M. Eugène Rimmel and M. Louis Elsingre, the two principal founders of the French Hospital in London, with the Order of the Legion of Honour.

THE number of persons who have died of small-pox in Norwich has now risen to 500. The disease, however, is greatly abating.

HANNAH STEELE, the woman charged with the murder of Mr. Andrew Harris, a surgeon at Manchester, has been acquitted.

A MEETING of the Poor-law Medical Officers of Cambridge and Huntingdon will be held on Tuesday, March 26th, at 2 P.M., at the house of Dr. Bradbury, 59, Corpus-buildings, Cambridge, to consider the clauses of Mr. Stansfeld's Public Health Bill.

DR. J. D. MACDONALD, R.N., F.R.S., has arrived in England, and will be prepared to assume his duties as assistant-professor at Netley on the opening of the session.

M. PICHEL DE LA RIVE, Professor of Zoology and Comparative Anatomy at the Geneva Academy, has just died there at the age of sixty-three.

ON Monday a large meeting was held at King's Lynn, with the object of founding a Convalescent Home at Hunstanton, within a few miles of Sandringham.

IT is announced that a gentleman has offered to give £10,000 towards the establishment of a convalescent institution at Morecombe, near Bradford.

THE deaths in London last week were 209 below the corrected average numbers in the corresponding week of ten previous years.

Public Health.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

ON Saturday last there was a strong muster of members and visitors. Dr. Aldis, in the absence of Dr. Druitt, took the chair.

A paper was read by Dr. Barclay on the Public Health Bill introduced by Mr. Stansfeld. He said that with respect to the proposed division of the sanitary authorities into urban and rural, he did not see any other acceptable proposal, and with respect to consolidation of the law, he agreed with the Government in thinking that it would not do to wait. We should take advantage of the present state of public opinion, and pass as good a law as possible. With respect to the authorities to be selected, he felt sure no Liberal Government would make Crown nominees the administrators of public rates, and in his opinion any new board would be composed of the same persons as are now elected to vestries and boards of guardians. Many of the existing areas would be too small for sanitary purposes, and Mr. Stansfeld's Bill well provides for combination. The idea of combination he thought most valuable, but that of intermediate authorities he could not understand. No local authority would submit to another local authority. No London vestry would listen to the Metropolitan Board of Works, nor abide by their orders. It appeared to him that compulsion was amply provided in Clauses 8 and 9. It was evident that the Bill contemplated the employment of persons of different qualifications as officers of health in urban and rural districts. He saw no alternative to this. In the towns there might be medical officers of health, after the manner of Liverpool, but in smaller towns and in the rural districts this would not be possible; for if the salary were adequate to secure a first-class officer, it must be drawn from too large an area to administer properly, and if the area were smaller the salary must be small also, for he did not believe that the country authorities would stand much additional taxation. The only alternative was to employ Poor-law district medical officers, and to give them the assistance of good medical inspectors appointed by the Government, without which they could not be expected to act efficiently in opposition to the interests of their employers. In towns he thought that there should be a clause to insist upon the appointment of one head, with power to employ the Poor-law district medical officers as deputies. With respect to Clause 61, providing for the registration of disease, he thought it somewhat indefinite. Accepting the Bill as a valuable instalment of legislation, he yet thought the medical element not sufficiently recognised.

Dr. Tripe thought the Bill badly drawn. The inspector may attend local boards and rural authorities, but not urban authorities. There is still no power to remove the sick to hospital, and no penalty on the refusal to go and on obstructing the removal. There is no sufficient extension of order power. Magistrates cannot order the abatement of a nuisance. The Bill curtails the power of the inspector of entering houses suspected of containing unwholesome meat, by requiring him to get a magistrate's order.

Mr. Liddle thought there were some most valuable clauses which might be extended to the metropolis with great advantage—going from the 55th to the 61st inclusive,—and also the new nuisance clauses, 72, 66, 44, 74, 75, and 77. There was still no power to prevent people rebuilding unhealthy houses, and whilst there was authority to enforce the provision of mortuaries, there was none to get the land on which to build them.

Dr. Rogers drew attention to the absence of any provision for paying the Poor-law medical officers for their extra services.

Mr. E. Chadwick, C.B., said he considered the Bill the best that could be got under the circumstances. He would have preferred to have boards of guardians the universal sanitary authority. Whether in urban or rural districts, the duties of the medical officers of health should be laid down by the central board.

Dr. Stevenson said that nuisance clauses would be most valuable in London, particularly those from the 32nd to the 50th.

Dr. Letheby proposed that the Bill should be referred to a committee. He thought it a jumble of suggestions thrown together without much consideration. The Bill in its present form would not work.

Dr. Stallard seconded the proposition, and observed that the machinery for making bye-laws was not satisfactory.

Dr. Buchanan said that the suggestions of the Association would, no doubt, receive the most careful consideration of Mr. Stansfeld.

The motion was carried, and a committee was appointed to draw up a report.

HEALTH OF LIVERPOOL.

Dr. Trench's annual report is, as usual, full of interest. He reviews the sanitary history of Liverpool during the last ten years, and it is no doubt a source of regret to him that, notwithstanding his great labours, so much still remains to be done before any very hopeful view can be taken of the future. During the last year the death-rate was 35·1 per 1000. It was highest in Vauxhall ward (43·2) and lowest in Rodney-street and Abercromby ward (23·4). The deaths of children under five years of age comprised 48·0 per cent. of the whole, and the proportion ranged from 39·6 in Abercromby to 57·9 in Scotland ward. Zymotic diseases accounted for 35·5 per cent. of the mortality, Scotland ward being again at the head of the list. The large majority of deaths from typhus occurred to persons of the labouring classes. Dr. Trench gives a very elaborate table, showing the daily deaths from diarrhœa and the state of the weather from June to October, both inclusive. Dr. Trench devotes considerable space to the history of the small-pox epidemic. During the first seven months of 1870 there was not a single death from small-pox. The disease appears to have been imported from Gallicia by two Spanish sailors. They sickened at sea, and on arriving were sent at once to hospital. Since then there have been 2093 fatal cases. There had, however, been several sporadic cases in the beginning of the year 1870, though the spread of the disease could not be traced to them. Dr. Trench is of opinion that the chief propagators were persons connected with the shipping and the port, and that there was always a renewed stream of imported contagion which added somewhat to the virulence of the disease. At first 30·7 per cent. of the persons attacked were seamen, whereas the indigenous epidemics have invariably prevailed amongst the labourers. It is remarkable that the epidemic was first developed in Everton, in and near Netherfield-road, in which the Small-pox Hospital is situate, and it was principally confined to that district until the beginning of last year, when it extended to every district. The epidemic began to wane during July, and had almost ceased before

the end of September. The influence of vaccination in mitigating the severity of the disease was well shown. The deaths of those in whom vaccination was doubtful were equal to 56·4 per cent.; where one cicatrix was visible, 14·9 per cent.; where two cicatrices were visible, 9·8 per cent.; and where three, at the rate of 7·0 per cent. Dr. Trench is furnished with a daily list of the fresh cases of typhus fever, small-pox, and relapsing fever, and he is enabled to classify the districts and streets in which sickness has prevailed. We have no means of knowing the population of some of these streets, but it is significant to notice that the number of persons afflicted is counted by hundreds—for example, in Hornby-street there were 236 cases of zymotic disease; in Rachel-street, 237; and in Carlton-street, 202. These streets must be rather expensive institutions. Dr. Trench devotes a most interesting chapter to the question of a public mortuary, and another to the provision of hospitals. He draws special attention to the necessity of such hospitals being within or near to the districts they are intended to supply, and observes that distance from the residence of the sick is a fatal drawback to their usefulness. He recommends the establishment of numerous small hospitals conveniently placed, and he endorses the suggestion made by this journal that open spaces should be secured for the erection of temporary hospitals during epidemic seasons. Dr. Trench has had large experience in disinfection. There are two forms of apparatus in Liverpool. In one the oven is heated by steam, in the other by flues. The difficulty of the first is to get a sufficiently high temperature, of the second to prevent scorching. Any temperature in excess of 212° Fahr. is apt to injure clothing coming into direct contact with the metal casing. The articles were stoved for six or eight hours, and their number in the year was 118,421. In conclusion we can only refer to Dr. Trench's report as a model which we should desire to find followed in all important towns.

A NEW LUNATIC ASYLUM FOR PLYMOUTH.

There is a great deficiency of accommodation for lunatics in Plymouth. The lunatic asylum is full of harmless and incurable patients, and the workhouse has no sufficient accommodation for them. The Poor-law Board, too, refused to sanction any enlargement of the workhouse lunatic wards in the hope that the magistrates would build an asylum, and the latter object, with some reason, that such chronic cases should not be treated in a hospital for the reception of acute cases. The dispute illustrates the importance of placing the whole question of lunacy in the hands of the Local Government Board. The magistrates are amenable to the Home Secretary, and the guardians to Mr. Stansfeld. If the Lunacy Commissioners were the servants of the latter, a proper understanding would no doubt be come to.

OFFICIAL INQUIRY AT RUTHIN.

Ruthin, in Denbighshire, which has had a death-rate of 27·61 per 1000 during the last ten years, has recently been visited by Dr. Home, V.C., C.B., one of the inspectors of the Medical Department of the Local Government Board, with a view to report upon its general sanitary state. The Inspector sums up the results of his inspection in the following condemnation of the Ruthin Town Council:—In the borough of Ruthin there exist the unwholesome conditions which foster certain kinds of disease, and which aggravate all others. Those conditions arise naturally from the fact of its being an old town, where the soil and dwellings have received the accumulated impurities of hundreds of years. To countervail this nothing effectual has yet been done. In Ruthin there is the extremity of sanitary neglect, and, as a consequence, a town which, from its natural advantages and from the absence of unwholesome occupations, ought to rank high amongst towns for healthiness, is found to have an habitual death-rate exceeding that of some manufacturing cities. We hope that the report will awaken the Town Council to a proper sense of their duty.

Whitechapel.—The return of pauper illness for the quarter ending last December indicates a remarkable improvement in the sanitary state of Whitechapel as compared with the year before, and largely accounts for the diminution of pauperism. In 1870 the union medical officers attended 3523 patients, including 245 of diarrhœa, 171 of fever, and 39 of erysipelas. In 1871 they attended but 1705 cases, only 24 of which were fever, and 10 erysipelas. In this district there has now been a steady diminution in the amount of sickness, and particularly of fever; and much may be attributed to sanitary improvements on the one hand, and to a better administration of medical relief on the other. Formerly there used to be crowds of applicants for medical orders, and such orders were granted on the slightest pretexts, the relieving officers not having time to make inquiries. The staff has been increased, and greater discrimination is exercised, whilst the facilities for obtaining advice, medicine, and extra relief have been largely increased. The clerk to the guardians thus confirms the opinion that the more efficient the system of medical relief the less will be the number of paupers, and he also shows the intimate connexion between diminished pauperism and improved sanitary arrangements.

Scarborough.—Although the report of Mr. Bazalgette on the sewers of Scarborough has not yet been presented, steps have been taken to improve their ventilation. More than two hundred ventilators have been made. The Town Council have resolved to appoint a medical officer of health, and it is to be hoped that they will give such a salary as will secure the services of a really good officer. The Council have also appointed an inspector of nuisances. It is satisfactory to find that the attention of every house and hotel proprietor has been directed to the condition of their drains; and as the principles of house drainage have been pretty well explained in nearly all the public journals, it is to be hoped that there will be no recurrence of the mistakes committed at Londesborough Lodge.

ORGANIC MATTER IN WATER.

LAST week we gave a sketch of the chief sources from which the water-supply of towns is derived, and pointed out the assistance which their peculiarities afford us in judging of the nature and extent of the contaminations which the water has received. Among these contaminations the various and complex substances known by the common name of organic matter are the most serious, as they are, unfortunately, the most obscure. All organic bodies, from sugar or fat to eggs or worms—in other words, all but the simplest of carbon-containing substances, may, in a sense, be included under the term; but it is generally taken as referring mainly to the more or less altered exuviæ of men and the lower animals, to the products of the putrefaction of animal and vegetable substances, and to the low forms of life which accompany all organic pollution. Pre-eminence in noxious power is ascribed, in the present day, to the germs of special diseases, such as those which appear to exist in the rice-water discharges of cholera. Next in order of demerit come putrescent excreta, or other animal matter; for the fresh excreta, though unutterably disgusting, are perhaps not really dangerous in themselves. It is not pleasant to drink the diluted excreta of men, or even of pigs; but it is worse to drink the eggs of tapeworms, or the germs of cholera or typhoid fever.

Even if we knew with certainty the nature and amount of the pollution which had been thrown into water, we should still, it must be remembered, be a long way from knowing its composition as it is delivered at our houses. From the time when organic matter, of the kind we are considering, is added to water, it commences a complex series of changes which is only terminated by its entire oxidation. These changes vary, no doubt, with the amount of free oxygen in the water, the temperature, and the condition of rest or agitation to which the water is exposed. They are connected with the vital changes of low forms of life in the water, and it is impossible for anyone in a given case to assign the time necessary for their completion. If water has once been seriously contaminated with sewage, suspicion must almost always attach to it lest some portion of the organic matter, and that perhaps the most deadly, may have es-

caped oxidation, and remain in an active state. This we hold to be a fundamental principle in the study of water.

These considerations naturally suggest the inquiry, How can we judge of the present condition of a water? It is obvious that no process of analysis can detect the presence of organic matter which has already been destroyed by oxidation in the water. We might as well hope to determine the quantity of tallow originally present in a half-burnt candle. But even this comparison suggests the mode in which the problem has, to a certain extent, been solved, for if we could collect all the carbonic acid evolved during the burning of the candle, it would be easy to calculate the original weight of the tallow. It appears from many researches, and above all from those of Dr. Frankland, that during the oxidation of animal matter, in water, the nitrogen is always converted ultimately into nitrates or nitrites. Vegetable matters do not yield these salts under the same conditions, so that the nitrogen present as nitrates or nitrites in a water may, after making a small and constant deduction for the maximum quantity which can be due to rain, be taken as representing the previous animal—in most cases the previous sewage—contamination which the water has suffered. So with regard to chlorine. Most uncontaminated waters in the South of England contain about one part of chlorine in 100,000. If a sample of water contains more than this, and there is no ground for suspecting that it has received an impregnation of salt, the inference is strong that sewage has been mixed with it; for chlorides, derived from urine, are invariably present in sewage. The extreme ease with which the chlorine determination may be made renders this method an exceedingly valuable one.

These methods tell us something of the previous history of the water, but they say nothing about its *present* state. During putrefaction ammonia is evolved, and although it is soon removed by evaporation or oxidation, it is often present in sufficient quantity to form a valuable indication of present badness, and a further indication may be obtained in many cases by the judicious use of permanganate of potash, which, thanks to Mr. Condy of Battersea, is now a cheap reagent. But to obtain a complete account of the past and present state of a sample of water, as far as it can be obtained, much more complex processes must be employed. The process employed by Dr. Frankland in his reports to the Registrar-General is the chief one which gives trustworthy results, and this, unfortunately, is very difficult except to the trained chemist. We hope, however, before long, to offer to our readers a selection of methods of easy execution, by which country practitioners, or even intelligent laymen, may form for themselves a useful judgment on the quality of any sample of water submitted to them.

BRITON MEDICAL AND GENERAL LIFE ASSOCIATION.

THE annual meeting of this Association was held on Thursday, at the offices, 429, Strand, F. Webb, Esq., in the chair. The annual report and balance sheet, which will be found in our advertising columns, having been read,

The CHAIRMAN, in proposing their adoption, said that they contained no special feature of a sensational character, but exhibited a continuance of the uniform success that had attended the Association from its commencement. He had not, as in the case of some offices older than this, and of equal standing, to explain the causes of any decrease in the business for the current year. The Society had gone on steadily improving, and while the increase of premiums last year was about £17,000, it amounted this year to £20,000. The new proposals during the current year were 2507, as against 2373 last year, showing an increase of 134, representing a sum of £70,385. Of those proposals 131, for £45,424, had been declined, showing an increase of 37 in the number of proposals declined as compared with the previous year; so that the increase in the business was not attributable to any relaxation in the amount of caution observed in the selection of lives. The policies completed, numbering 1847, were fewer by 30 than last year, but the amount assured and the annual income received from them were considerably larger, showing that there had been an improvement in the class of business. The average amount of the policies last year was about £270; and the average of those of the present year was £300. With regard to the claims, they were less than those of last year by £15,000. The accounts had been made out strictly according to the Parliamentary form, but with a little more detail in regard to the expenditure. The result showed an excess of income over the expenditure of about £33,000, so that the reserved fund would be increased to that extent, and now amounted to over £600,000. It should be borne in mind that the assets were what might be called purely cash assets, which could be realised at a few days or hours' notice. The auditors had, as usual, been most careful in their examination. It would be observed that their report was signed by only three names instead of four, owing to the much regretted death of Mr. Rowland, whose successor the directors had not thought it right to appoint at present. With regard to the profits, the directors recommended the old rate of dividend, 8 per cent., and a resolution would be submitted to that effect. He was happy to say that the branches were in a very healthy condition, and bearing excellent fruit. In Scotland there was no English insurance office occupying so good a position as the Briton. This, no doubt, was largely owing to the high character, the position, and the indefatigable exertions of the gentlemen representing the Society in the North. (Hear, hear.) The four directors retiring were Mr. Wilson Ancell, Mr. George Chapman, Mr. Millis Coventry, and Mr. E. J. Oliver, who offered themselves for re-election. The result of the year's work was briefly this: There was a larger amount of business assured, and a larger amount of new premiums received. The average amount of the policies was considerably increased, the claims were less than last year, and the cost of obtaining the increased business was also considerably less. The directors looked forward with great satisfaction to the bonus that would be declared at the end of the year. There had been, no doubt, a very rapid increase in the Society's business. Ten years ago the income of the "Old Briton" was about £24,000 a year; now it was more than ten times that amount. It would be the duty of the directors to take care that the bonus to be ascertained should be the result of the most rigid investigation, and no labour or expense would be spared for that purpose. The members of the Society should bear in mind that their profits would largely depend upon their own exertions. If every policy-holder would bring another during the year, the result would be an immense increase of business. (Applause.)

Dr. TYLER SMITH (deputy chairman) seconded the motion. He said that, comparing the present with the past year, there had been an increase in the number of proposals, and a larger amount of premiums. The policies had also been for larger sums. The number of claims had been less, and the amounts paid in claims smaller. There could be no better proofs of success. He would not say any more. Brevity was the soul of business as well as of wit, and this was true of life insurance matters, with one exception: they all wished that the lives of their insurers should be as long as possible.

The motion was unanimously adopted.

Mr. MOFFAT (chairman of the Scotch board) moved the re-election of Mr. Wilson Ancell, and said he thought it highly advantageous to an office to have directors who had served a long apprenticeship, and were accustomed to all the details of the business.

Mr. PILCHER seconded the motion, which was unanimously agreed to.

Mr. FOX (of Dublin), in proposing the re-election of Mr. George Chapman, expressed the pleasure which he felt in hearing of the continued prosperity of the Society, and the confidence which he entertained as to its future success.

The resolution was seconded by Mr. Brown, and carried unanimously.

Dr. CARMICHAEL (of Edinburgh) moved the re-election of Mr. Millis Coventry, which was seconded by Mr. Milsom, and unanimously agreed to.

The re-election of Mr. Oliver was proposed by Mr. Scott, seconded by Alderman Oakshot, and agreed to.

Mr. OLIVER, in returning thanks on behalf of the directors re-elected, said they could not be otherwise than pleased at the progress of the Association. Every time they met they

appeared to be more friendly and more satisfied; and how could it be otherwise when everything smiled upon them? They had had their troubles and difficulties, but he believed that no office had been more favoured in its career of prosperity. He had been in the habit of meeting many committees and boards during the last sixty years, but he had never associated with a body of men who acted more harmoniously than the directors of the Briton.

Dr. RICHARDS proposed a resolution thanking the auditors, Mr. Alcock, Mr. Brown, and Mr. Brooks, for their services, awarding them a sum of 200 guineas, and re-electing them for the ensuing year.

Mr. DAVID HARRIS seconded the motion, which was unanimously adopted.

Mr. ANDREW MORRISON moved that a dividend at the rate of eight per cent. per annum on the paid-up capital be declared. This was seconded by Major Richards and unanimously adopted.

Rev. Dr. CHAVE moved a vote of thanks to the directors for the care and attention they had paid to the company's affairs during the past year. He said he had perfect confidence in those gentlemen, and, if it should please God to take him to-morrow, he knew that his children were safe in their hands.

Dr. OWENS, of Dublin, seconded the motion, and said that no office in Ireland stood higher than the Briton.

The motion having been passed,

Mr. CHAPMAN briefly acknowledged it on the part of the directors.

Mr. COVENTRY proposed, and Mr. OLIVER seconded a vote of thanks to Mr. Scratchley, the consulting actuary.

Mr. SCRATCHLEY, M.A.—I am much pleased to have the opportunity of offering you my thanks for not forgetting me to-day. During the ten or twelve years I have been connected with this Society, I do not recollect on any occasion having given any opinion or advice, or even having concurred in any step which has been taken by the directors, which I should not be pleased to repeat at the present time; and in order that no possibility of any misunderstanding may arise with respect to the advice I have given, almost every question which passes between Mr. Messent and myself is in writing. There are some simple tests which will, of themselves, show the general state a company of this kind is in. There are a dozen or more which I could mention, but there are two or three which occur to my mind offhand. One is this: are the assets steadily increasing or not? Now, I do not hesitate to invite you, who keep the balance-sheets of this Society to take them year by year and watch the steady way in which the assets of this institution have progressed, and I think that the amount of your reserve fund (as you will all find), £630,000, represents a very considerable increase since the last time it was brought before me in my capacity of actuarial referee. And the best sign of all about this is that by far the greater portion of this reserve fund is the result of the business—new business—which has been transacted within the last seven or eight years. If you will take up a list of the insurance companies, you will find that the Briton stands, last year, fourth in number of proposals for insurance that have been made. This speaks for itself, and is one of those simple tests by which the stability and prosperity of an association of this kind may be known. I am convinced of this: the more an office, the more its internal management, is brought to the light of day, the more the members of the actuarial profession will come round in admiring numbers to you. Hence it is that—seeing that next year we have to make again a valuation of our affairs, and that in my capacity of actuarial referee that duty will be entrusted to me—I have not on any occasion during my connexion with your Association hesitated to tell the directors, through their representative, Mr. Messent, that if I thought, or if anyone thought, or if the public thought, that it would give greater strength to their confidence in this office, I would not only invite the whole of the members of the actuarial profession to see what the results of our labours are, but give a full explanation to them of the theory and practice under which those results have been arrived at. The position of our Association, as I have before said, will be known when the actuarial valuation comes to be published next year; and the effect of the legal result will be that the public must have confidence in the stability of this office. You know I have always been against enormous profits and bonuses; and the Directors have never asked me to sanction excessive bonuses. If we want to secure the safety of this office we must keep a reserve fund sufficient to meet any contingencies. I say that already during the last four years there has been such an amount of diminution of liability, and such an amount of profit realised, as to justify me in promising that, unless other elements enter into our calculation which I cannot foresee, I can ensure as good a bonus in the next year as we had upon the last occasion. (Hear, hear.)

The CHAIRMAN moved a vote of thanks to the Scotch Board, upon whom he passed a warm eulogium. He congratulated the Board especially upon the accession of Prof. Laycock, who was, he said, well known throughout the civilised world.

Mr. JONES seconded the motion, which was unanimously adopted.

Professor LAYCOCK replied on behalf of the Board, and said he feared he was sometimes regarded as acting rather too rigidly in the admission of lives, but he thought it better to do a safe business than a large one.

Dr. SIEVEKING proposed a vote of thanks to the medical officers of the Society, Dr. Burrows, Sir R. Martin, Dr. F. Farre, Dr. Little, Mr. F. Le Gros Clark, Mr. W. Scovell Savory, and Mr. T. H. Wakley, whom he highly eulogised for their attainments; and to the legal advisers of the board, Mr. Green, Q.C., and Messrs. Bell and Stewards, to whom he paid a similar compliment.

Mr. TURNBULL seconded the motion, which was unanimously adopted, and suitably acknowledged by Dr. Carmichael and Mr. Steward.

On the motion of the Chairman, seconded by Dr. Richards, a vote of thanks was passed to the district managers, and was acknowledged by Mr. May and Mr. Killengray.

The CHAIRMAN then proposed a vote of thanks to the Actuary and Secretary, Mr. Messent, to whose ability, zeal, and untiring assiduity, he said the Society was largely indebted for its prosperity. He assured the members that the board highly appreciated the manner in which Mr. Messent performed the difficult and delicate duties of his office.

Mr. OLIVER seconded the motion, and urged Mr. Messent to be more sparing in his exertions on behalf of the Society, and more mindful of his own health.

Mr. MESSENT acknowledged the vote of thanks, and said that he had never, during the eighteen years of his connexion with the Society, felt more at ease with regard to its position than he did at present. He expressed his obligations to the assistant secretary, Mr. Beaman, and the other officers of the staff.

The proceedings were brought to a close by a vote of thanks to the Chairman.

Correspondence.

"Audi alteram partem."

ROYAL ORTHOPÆDIC HOSPITAL.

To the Editor of THE LANCET.

SIR,—In the published accounts of the meeting of the governors of the Royal Orthopædic Hospital, it is stated that I advised the Committee as to certain sanitary measures called for by an outbreak of scarlatina in the hospital; the surgeons of the hospital having declined responsibility in the matter. The statement is inaccurate, and conveys an erroneous impression.

I was first asked by Mr. Adams, as a friend, to see a patient of his suffering from a severe attack of scarlatina. I did so to oblige him, and not at the request of the Committee; and I had repeated consultations with Mr. Adams on the case. Subsequently, at the request of Mr. Adams, and in consultation with him at my house, I drew up some instructions for the guidance of the Committee. And thirdly, on the written request of Mr. Tamplin, I gave advice as to the readmission into the Orthopædic Hospital of a child who had recently been discharged from the Fever Hospital. I have had no other dealings with the Ortho-

pædic Hospital. I may add that nothing would have induced me to interfere with the medical affairs of the Orthopædic Hospital, except at the request of, and in consultation with, its medical officers; or even then had they declined all responsibility in the matter in which they sought my advice.

I am, Sir, yours, &c.,

Wimpole-street, March 19th, 1872. CHAS. MURCHISON, M.D.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—I beg to enclose the form of petition which I have forwarded for presentation to the House of Commons on Thursday, the 21st inst., and shall be obliged if you will publish it in your this week's issue.

Would you also permit me to state, for the information of the medical public, that all that will be necessary for those to do who agree with its tenour, is to copy it out fairly on one side of a sheet of paper and sign their name; they can then send on the petition to their own members or to me, as they think best. If forwarded to me it will be put into the hands of a friendly member for presentation. Whatever is done should be carried out without delay.

I am, Sir, yours obediently,

33, Dean-street, Soho, March 20th, 1872. JOSEPH ROGERS.

To the Honourable the Commons of Great Britain and Ireland in Parliament assembled.

The humble petition of the undersigned sheweth,—

That whereas a Bill, called the Public Health Bill, has been brought before your Honourable House seeking to impose fresh burdens of work and responsibility upon Poor-law Medical Officers without providing for their proper remuneration for the same, the effect of which will be that the sanitary work entrusted to them will of necessity be ill-performed;

That whereas the position of the district Poor-law Medical Officer is not sufficiently independent of local influences to justify his incurring the odium and responsibility of directing what works should be executed to remove unsanitary conditions in his locality, the existence of which conditions he may have reported; and whereas Clause 56 of the said Bill, which relates to the establishment of Poor-law Dispensaries, is permissive only, as it leaves the question of their establishment or otherwise solely within the discretion of the Local Government Board; and whereas, to be truly of national benefit, it is necessary that such dispensaries should be more extensively distributed than is contemplated by the clause in question;

Your petitioner prays that no Bill be allowed to become law which does not provide for the proper remuneration of District Medical Officers who may be required to act as Deputy Health Officers, and that does not place the odium and responsibility of sanitary action in a superior health officer independent of private practice, and paid accordingly.

Your petitioner further prays that Clause 56 be amended so that the establishment of dispensaries may be made compulsory generally, instead of permissive only, as now contemplated.

And your petitioner will ever pray.

MILITIA SURGEONS.

To the Editor of THE LANCET.

SIR,—Your remarks in THE LANCET of the 16th inst. on the position of militia surgeons most richly merit our gratitude. The reply given to Mr. Wheelhouse by Mr. Cardwell on the 9th inst., to the extent it goes, does, indeed, place us in a most unfair position. Had the answer been extended to the latter portion of the inquiry, "What compensation was intended to be given for loss of income?" our anxieties might not have arisen; for surely it never can be the intention of the Government to shelve a body of men, several of whom have spent many of their best years in their service without just compensation.

There are many amongst us to whom the pay we have long received, and which we have looked upon as a permanent portion of our income, is of serious importance, and the loss of which would, doubtless, to some, be productive of considerable embarrassment, and which we believed nothing but incompetency or misconduct could deprive us of.

It may be said that the majority of militia surgeons are engaged in private practice, and that they have that to fall back upon; but it should be borne in mind that our duties, and especially those that have entailed absences from home, I mean in recruiting, have not been carried on without considerable sacrifices, to regain which would take much time, would be attended with much difficulty, and in many cases would be utterly impossible.

Let us trust that our fears for the future may be groundless, and that justice will be meted out to a body to whom, I feel confident, it will be conceded that they have done their duty in the important and responsible positions they have held.

I am, Sir, your obedient servant,

A MILITIA SURGEON OF TWENTY YEARS' STANDING.

March 19th, 1872.

PHILADELPHIAN DEGREES: A WORTHY EXAMPLE.

To the Editor of THE LANCET.

SIR,—I am not surprised at your present views respecting the LL.D. Philadelphia, and advising me to keep the degree a profound secret. On referring to THE LANCET of some twelve months ago, I find a paragraph appears to the effect that a certain medical gentleman had the same degree conferred on him from the Philadelphia University by the Senate. I have conversed with several leading physicians and surgeons both in London and Dublin on the subject, and from the information gained from them, I have put the degree I obtained *in absentiâ* behind the fire. I was taken off my guard to a certain extent by your permitting the same degree to appear weekly in your advertising columns. I enclose you an advertisement which I have marked; the title mentioned is of no more value than the one I have already destroyed, and also from Philadelphia. I find several persons making use of American M.D.s and LL.D.s, and they inform me you recognise the same by allowing them to appear in print in a journal that is supposed to protect the interests of the medical profession.

I have arrived at the firm conclusion that these American degrees are worthless, and can be held only for the purpose of misleading the public, and I was mad to think of making use of such poor honours, and all well-thinking practitioners will be of the same opinion as myself.

I am, Sir, your obedient servant,

March 18th, 1872. L. R. C. S. I.

*** We commend the above example to all holders of so-called degrees from the same source. We do not doubt that most of them will take the same course after the various revelations that have been made of late.—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

"HOSPITAL SUNDAY" has been a decided success in Manchester this year, the total receipts up to the 7th March being £5314 13s., as against £3602 4s. 4d., the total sum received last year. The revenue accruing from this movement has been largely enhanced this year by a sister institution, "Hospital Saturday," which owes its existence to the vigorous efforts of the honorary secretary to the movement. The sum derived from this source up to the 7th of March amounts to £1421 8s., so that a total of £6736 falls to be apportioned among the medical charities of Manchester and Salford during the present year.

At the last meeting of the Manchester Medical Society, Mr. Bradley showed the following interesting pathological specimens:—A heart with persistent foramen ovale, and also a heart which had attained the unusual weight of 29 oz.; a bladder with a single ureter, taken from a subject in whom the kidney and renal vessels of the same side were absent; and a specimen of trichina spiralis from a subject in the anatomical rooms at the School of Medicine. The patient died in the Withington Workhouse, and the only ascertained source of infection open to him was the administration of beef-tea; but it was suggested by one of the members, as a possible source of fallacy that the relatives of the deceased might have surreptitiously introduced animal food of another description infested with the parasite. Mr. Bradley remarked that this was the only English case of trichiniasis which had been observed.

Dr. Leech showed an interesting specimen of rupture of the heart, taken from a patient who died in a state of dementia in the Withington Workhouse. Mr. Boutflower showed a woman with a tumour of the breast, whose nature

was somewhat uncertain; he thought it was non-malignant, and that it might be either scleroderma, elephantiasis, or a fibro-cystic tumour. The prevalent impression seemed to be that it was malignant.

Dr. Lloyd Roberts exhibited the following specimens of diseased ovaries removed by abdominal section since the Society's last meeting:—Two multilocular ovarian tumours of the pseudo-colloid variety, from women aged twenty-six and thirty respectively, both of whom recovered; and a most typical specimen of encephaloid disease of the ovary, taken from a young woman of twenty-two. In the latter case, a specimen of which was shown under the microscope, the pedicle was a very broad one, and the case unfortunately terminated fatally. Dr. Glascott read for Dr. Samelson the interesting notes of some cases of ectopia lentis, and showed the patients.

Dr. Ransome read the first portion of an elaborate and philosophical paper on the mechanical conditions of the respiratory movements, for which he received the hearty thanks of the Society, with the request that he would read the remaining portion at the next meeting. Mr. Haddon read a paper on the recent epidemic of small-pox in Eccles, for which he was awarded a vote of thanks.

The report of the Manchester Royal Infirmary for the past year has just been issued, a notice of which will appear in my next letter.

Manchester, March 12th, 1872.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

ACCORDING to the promise made in my last letter, I proceed to give some account of the surgical work done in our hospitals during the last few months. The antiseptic treatment, according to Lister's method, has been extensively employed at both the General and Queen's Hospitals, the strength of the solution of carbolic acid varying from 1 to 60 to 1 to 100 parts of water, and eight folds of gauze being applied over the wounds. Primary amputations, resections of joints, and compound fractures of the limbs have been most successfully treated in this manner. The carbolised catgut ligatures have been tried and found to answer well, not only in cases of amputation, but also for the deligation of large arteries—as in a recent case of Mr. Jolly's, where the femoral artery was tied for popliteal aneurism. The parts united by the first intention, and no suppuration ensued.

Skin-grafting has been on its trial at both institutions, and the general verdict is in its favour. Mr. Gilbert Smith, the house-surgeon of the Queen's Hospital, reports that large ulcers of the leg and extensive burns have been subjected to this treatment with great advantage, the healing process being accelerated, and the resulting cicatrix less tense and unyielding than is ordinarily the case. Small elliptical pieces of skin are taken either from the inner side of the thigh or the upper arm, about a quarter of an inch long and an eighth of an inch broad, by the "forceps scissors" manufactured by Ferguson, of London, and retained *in situ* by soap plaster spread on linen. The grafts, which are placed about half an inch apart, are generally found to become attached in about four days; but as all do not prove effectual, and the pellicle rarely extends more than a quarter of an inch around each graft, it is necessary for the cicatrisation of a large ulcer that the operation be repeated more than once.

Mr. Bennett May gives an equally favourable report of the results of this procedure at the General Hospital. Two of the rarer forms of dislocation at the shoulder-joint have recently been treated there. In one case, subcoracoid dislocation of seven weeks' duration, in a woman aged thirty, was reduced by traction, with the heel on the axilla; and in the other case the dislocation was on the dorsum scapulæ, in a man aged twenty-five, and was reduced by flexion of the arm across the chest.

Herniotomy in a patient aged seventy, for strangulated femoral hernia of three days' standing, has been successfully performed by Mr. Pemberton. The sac contained a small knuckle of intestine, but a large quantity of adherent omentum, and this was allowed to remain.

Trephining was recently done by Mr. Goodall at the same institution for a compound fracture of the occipital bone, caused by the kick of a horse. The depressed bone was as large as a shilling. Immediate relief followed the operation, and the man, aged thirty-one, is now well.

There is at the present time a deeply interesting case under treatment of injury to the spine, in a man aged fifty, caused by his being run over by a heavy trolley. The wheels passed over the neck, and great swelling at once ensued on the left side; but there was no sign of fracture, and no paralysis, at the time of the injury. In the course of a few hours the left arm began to be powerless, and the paralysis gradually extended to the right arm and to the rest of the body, so that on the fifth day he was completely paralytic. Calomel was given to ptyalism, and cupping employed. The symptoms are now passing off gradually. On the twelfth day he could use the right arm and leg. The left side, which was the first paralysed, is still the most affected, and the bladder has to be relieved by catheter.

At the Queen's Hospital there are now many cases of interest. Among them is a woman, aged thirty-six, under Mr. West's care, with secondary syphilitic stricture of the pharynx and œsophagus. The contraction caused by the cicatrices in the throat is so rigid that the patient can only swallow fluids; and the obstruction to the larynx is also so great that it has been found necessary to perform laryngotomy. Dilatation of the œsophagus, with bougies, is being employed, and iodide of potassium given in twenty-grain doses.

Mr. Furneaux Jordan has recently removed the entire tongue successfully for a cancer in an elderly woman. He made an incision from the commissure of the lips, outwards and upwards, to the extent of three inches, and then applied two écraseurs, one round the back and the other round the base of the tongue. Very little hæmorrhage occurred, and the patient made a rapid recovery. Amussat's operation was performed last week by Mr. Gamgee. Mayer and Meltzer's aspirator has been used with advantage for the evacuation of large abscesses.

Staphyloraphy was performed on Saturday last on a girl aged eight by Mr. West; Pollock's operation, combined with division of the palato-pharyngeal being employed. The use of chloroform and the appliance of Smith's gag rendered the operation comparatively easy of performance.

At the last meeting of the Midland Medical Society, after the display of many interesting pathological specimens, the adjourned discussion on Mr. Jordan's paper "On Surgical Diseases of the Rectum, and on Excision of the Hip-joint," was renewed, and then a valuable paper "On certain Forms of Paraplegia" was read by Dr. Russell.

The annual meeting of the governors of the "Sanatorium" was held on the 29th ultimo, when a highly satisfactory report was read, showing that the institution was out of debt, and announcing that the new building at Blackwell, which will be far larger and more commodious than the present one, was being pushed forward rapidly, and that the work of furnishing would soon have to be commenced.

Birmingham, March 12th, 1872.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

THE Morisonian lectures on Insanity are now being delivered twice weekly, at the College of Physicians, by Dr. Arthur Mitchell. They are this year of more than usual interest, and from their practical bearing value is given to their statistical details. The first lecture—on the Curability of Insanity—was noticed in your last issue. The second had for its subject: "The Medico-legal Relations of Insanity to will-making, and Imbeciles." In this lecture Dr. Mitchell considered the medico-legal relations of insanity to will-making, when a testator's alleged incapacity rested merely on weak-mindedness, and showed that the will of an imbecile might stand as valid when shown to be the free expression of his own purpose and desire, or the production of his uninfluenced mind, and when its provisions were rational and natural. He considered that much importance should be given to the character of the will itself, observing that as a will almost certainly became

invalid when delusion actually appeared in it, so a like effect would result from the appearance in a will of the folly of a fool. In the third lecture (which you also briefly noticed) Dr. Mitchell gave the first of a series of three on the natural history of the diseases of early life—their date of origin, heredity, consanguinity of parentage, &c. In the course of it he stated it as his opinion that disease liable to hereditary transmission does not always show its existence at birth, but is transmitted in predisposition only. It may be directly transmitted even when not actual in the parents. The concluding portion of the lecture was devoted to the influence of consanguinity of parentage on the mental health of offspring.

I observe that Mr. Angus Macintosh, of Holmes, has again been attempting to raise proceedings against Dr. S. Graham Weir for having twenty years ago (in 1852) signed a certificate to consign him to a lunatic asylum. He has made application to the Court of Justiciary for a warrant for criminal letters against that gentleman. It appeared the Lord Advocate had declined to prosecute, and he had failed in getting concurrence to a private prosecution, and on making application he was informed, through the Crown agent, that his lordship is of opinion it is not fitting he should grant his concurrence in such a prosecution, proposed to be instituted nearly twenty years after the occurrence of the alleged facts on which it is founded, and without any explanation of the delay. His lordship therefore refuses his concurrence. The further hearing of this case was postponed. Your readers may remember that some years since Mr. Macintosh raised an action against Messrs. Smith and Lowe for detaining him in Saughton Hall Asylum, and that he had previously annoyed Dr. Weir because he had granted the certificate on which he was received into that asylum. It is very discreditable that the law still permits of medical men being worried by the institution of such vexatious proceedings after such length of interval. One can hardly believe the Court will grant the application when the Lord Advocate has refused his concurrence.

Edinburgh, March 11th, 1872.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

AT a late meeting of the Surgical Society, Dr. Corley read a paper "On the Bavarian method of using Plaster-of-Paris in Fractures." This apparatus was first described by Assistant-Surgeon Moffitt in the Appendix to the Army Medical Report for 1869, published last year, as having been used in the Bavarian army for many years.

Mr. Butcher, of Sir Patrick Dun's Hospital, ligatured in January last the external iliac artery on the right side, for a large inguinal aneurism, extending above Poupart's ligament. On the thirty-fifth day the ligature came away, and at present the wound is as good as healed. The tumour is reduced considerably in size, being quite hard, showing that consolidation of its contents has taken place. The patient upon whom this operation was performed was nearly seventy years of age.

A meeting of the Council of the Institution for Idiotic Children was recently held, when Dr. Kidd read the report of the last year, which showed the institution to be in a very satisfactory condition. Among many who subscribed to its support was a lady who contributed the sum of £500, but who did not wish her name to be known. All the children are not entirely supported by it, some paying from £2 to £25 annually, according to the state of their friends' income. Lord Butler alluded to the generosity of Dr. Stewart, who had presented them with the noble mansion of "Palmerston," and proposed that the asylum for the future should be called "The Stewart Institution." Dr. Kidd seconded the proposition, and dilated on the munificence of Dr. Stewart, who, in addition to the grant of the mansion, had presented them with the sum of £5000 towards the maintenance of the institution.

There has been lately a considerable amount of discussion in several of the newspapers here relative to the rumour that the Government were about to confer a baronetcy on one of our leading surgeons in this city, and Messrs. Robert Smith, Butcher, Colles, Macnamara, Wharton, McDonnell, &c. have each had their advocates; but I believe I am correct in stating, from information received, that *at present* the rumour has not any foundation; and that it is simply put into circulation by the interested friends of parties who each wish to push forward their favourite's claims to such a dignity. Should, however, such an honour be bestowed, it is most unlikely that her Majesty's advisers could pass over the two gentlemen who hold the position of Surgeon to the Queen in Ireland. The elder of these is Mr. Robert Adams, who from his professional services is well worthy of the honour; but should he decline, Mr. Porter, a skilful operator, with an extensive private practice, should undoubtedly rank next, especially as rumour has it that he has already refused the offer of knighthood by a former Government.

The Mallow Poor-law guardians have unanimously granted a superannuation allowance of £60 a year to Dr. Sheehan, late medical officer to the Buttevant district.

Dublin, March 12th, 1872.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

IN THE LANCET of Feb. 3rd appears the following note on small-pox:—"In New York the deaths last week were 216; a return which has redoubled the exertions of the Board of Health to enforce the sovereign precaution of Jenner on a recalcitrant population." It is probable that for "New York" we should read "Philadelphia"; for the deaths from small-pox in New York for that week were 32; and in Philadelphia not far from the figures above given. It may interest your readers to learn more definitely the course of small-pox in New York during the present epidemic, and the measures employed to control its spread. The first decided epidemic tendency of small-pox was noticeable during the last months of 1868. Previous to October of that year scarcely 100 cases had been reported in the city for three years. In the first quarter of 1869, 75 cases were reported, against 31 in the last quarter of 1868; in the second quarter of 1869 the number increased to 294, and in the second quarter to 386. In the third quarter the number of cases declined very rapidly, but in the fourth they again increased. During 1870 and 1871 the number of cases gradually increased with quarterly fluctuations. The progress of the epidemic may be stated thus:—1868, 24 deaths; 1869, 593 cases, 109 deaths; 1870, 1093 cases, 293 deaths; 1871, 3084 cases, 805 deaths. Small-pox has, therefore, exhibited a constantly increasing epidemic tendency in New York during the last three years, and yet at no time has the number of cases been large. Many cities of not one-tenth the number of inhabitants have given a much larger weekly average of cases for months; while the mortality from small-pox in Philadelphia during the past three months was fully three times greater than the total weekly average of cases reported in New York. And yet no city can be more exposed than New York to small-pox, owing to the constant influx of emigrants from the whole civilised world. The protection of the city from a wide-spread and fatal epidemic from this pestilence is due to the wise and energetic action of its Board of Health. Unaided by any stringent vaccination laws, it has nevertheless succeeded in securing the vaccination or revaccination of nearly the entire population. Its inspectors have made house-to-house vaccinations of the entire poor class, have vaccinated the children of the public and private schools, and have visited all the factories and workshops and vaccinated the operatives. The method of procedure when a case is reported is as follows:—The inspectors at once visit the sick person; if he can be isolated perfectly in his own house he is allowed to remain, under stringent regulations as to the care of clothing, use of disinfectants, &c.; if he cannot be safely left at home he is taken to the hospital, and his room and clothing disinfected. The work of vaccination is then begun, first in the house, then in the adjoining houses and block, until the whole neighbourhood is protected. The following are the statistics of small-pox in this city for 1871:—Admitted to Small-pox Hospital 2498, of which number 1731 were from the city, 235 from quarantine, and 532 from other places beyond the city limits; isolated and treated at their

homes, 484; secreted and not reported until dead, 101: total cases, 3084. The percentage of deaths to total cases was 26·10; percentage of deaths to cases treated in the Small-pox Hospital, 20·46.

New York, February 20th, 1872.

THE ROYAL ORTHOPÆDIC HOSPITAL.

SEVERAL of the more influential governors, including Lord Shaftesbury, the President, Lord Abinger, and the founder of the hospital, O. Harris, Esq., have taken steps for the convening of a special Court of Governors at an early date, to consider the question of the resignation of Messrs. Tamplin and Adams as surgeons to the hospital, and with the view of reinstating these gentlemen in the posts which they have hitherto held.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 14th:—

Cartwright, Henry Gordon, Burton-on-Trent.
Cave, Alfred, Barking, Essex.
Clyma, Handsford Hoaking, Truro, Cornwall.
Flower, Blaise Bernard, Floore, Northamptonshire.
Julius, Stanley Alexander, Mortlake.
Stone, Charles Henry Augustus, Poole, Dorset.
Swan, William George, St. George's-road, Southwark.

On the same day the following gentlemen passed their First Professional Examination:—

John Randall Burton and Thomas Pink, Guy's Hospital; Richard Jocelyn Swan, Dublin.

COLLEGE OF PHYSICIANS, IRELAND. — At examinations held on March 11th, 13th, and 14th, the following gentlemen obtained the licences in Medicine and Midwifery:—

MEDICINE. — Nathaniel Mayne, William Henry Ovenden, John Charles Cæsar Pemberton Pigott.
MIDWIFERY.—Nathaniel Mayne, William Henry Ovenden.

FORTY-ONE deaths from violence occurred in London last week.

ON Wednesday the 115th anniversary of the Royal Maternity Charity was celebrated by a dinner at the London Tavern, for the purpose of raising funds to clear off a debt. About 100 ladies and gentlemen sat down, and we are glad to say that during the evening subscriptions amounting to £900 were announced by the secretary. Since its foundation this charity has assisted 428,977 patients, 3300 of these cases being attended last year.

THE ROYAL SOCIETY.—There are fifty-nine candidates proposed for the Fellowship of the Royal Society at the annual election in June next, and only fifteen vacancies. Amongst the candidates are the following medical men—viz.: Andrew Leith Adams, Surgeon-Major William Aitken, M.D., Sir Alexander Armstrong, K.C.B., M.D., John Beddoe, B.A., M.D., Alexander Carte, M.D., Frederick Le Gros Clark, F.R.C.S., Professor Cleland, M.D., Wilson Fox, M.D., Arthur Gamgee, M.D., Edmund Thomas Higgins, M.R.C.S., Edmund Chas. Johnston, F.R.C.S., George Johnson, M.D., Edward Latham Ormerod, M.D., Professor Oliver Pemberton, M.D., William Overend Priestley, M.D., Charles Bland Radcliffe, M.D., George West Royston-Pigott, M.D., Edwin T. Truman, M.R.C.S., Herbert Davies, M.D., and Michael Foster, jun., M.D.

Medical Appointments.

BENNETT, F. C., M.R.C.S.E., has been elected Medical Officer for District No. 4 and the Workhouse of the Alderbury Union, Wilts, vice F. P. Darke, M.R.C.S.E., resigned.

BENNETT, J. M., M.D., has been appointed a Consulting Medical Officer to the Liverpool Dispensaries, on resigning as Hon. Medical Officer to the South Dispensary.

BISHOP, W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Elham District and the Workhouse of the Elham Union, Kent, vice H. Bradley, M.R.C.S.E., resigned; also Registrar of Births &c. for the Elham District.

BORRHAM, W. T., L.R.C.P., M.R.C.S.E., has been appointed Medical Officer to the Long-Bredy District of the Dorchester Union, vice T. Parker, M.D., resigned.

ELLERTON, G., M.R.C.S.E., has been elected Medical Officer for the newly formed Kippax District of the Tadcaster Union, Yorkshire.

GREEN, F., L.R.C.P.Ed., M.R.C.S.E., has been reappointed Medical Officer to the Workhouse of the Settle Union, Yorkshire, at an increased salary.

HEPBURN, Mr. R., jun., has been appointed Dental House-Surgeon to the Dental Hospital of London, vice M. A. de Bronquens Capel Stevens, M.R.C.S.E., L.D.S., resigned.

HIND, H., M.R.C.S.E., has been appointed Medical Officer to the Stockton-on-Tees Dispensary, vice Howson, resigned.

IRELAND, T. R., M.R.C.S.E., has been elected Medical Officer for the re-arranged Tadcaster District of the Tadcaster Union.

MIDDLETON, Dr. WM. H., has been appointed Medical Officer to the Rusholme, Fallowfield, and Withington Divisions of Police.

MOSES, Mr. W. R., has been appointed Assistant House-Surgeon and Dispenser to the Kent and Canterbury Hospital, vice Gunning, resigned.

O'HANLON, M., L.K.Q.C.P.I., L.R.C.S.I., has been elected a Medical Officer to the Workhouse, Castlecomer Union, Co. Kilkenny, vice E. Nolan, L.K.Q.C.P.I., L.R.C.S.I., deceased.

OSBORN, H., M.R.C.P.I., has been appointed, temporarily, Medical Officer of Health for Southampton, vice M. J. MacCormack, M.B., resigned.

OWEN, D. C. LL., M.B., M.R.C.S.E., has been appointed a Surgeon to the Birmingham and Midland Eye Hospital, vice C. Townsend, M.R.C.S.E., deceased.

PRICE, F., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Birkenhead Borough Hospital, vice Wm. R. Hughes, L.K.Q.C.P.I., L.R.C.S.I., resigned.

SARJANT, J., M.D., has been appointed Surgeon to the Poplar Division of the Metropolitan Police, vice B. J. M. Grant, M.R.C.S.E., deceased.

SMITH, Mr. C. H. (House-Surgeon to the Northern Infirmary, Inverness), has been appointed Medical Officer for the Parishes of Knockbain and Killearnan, Ross-shire, vice D. Campbell, M.B.

STANFER, J. F., M.D., M.R.C.S.E., L.M., has been appointed Surgeon for the Nayland District of the Great Western and Bristol and Exeter Railway Provident Society, vice J. Lampard, M.R.C.S.E., deceased.

STRANGE, A., M.D., has been appointed Medical Superintendent to the Salop and Montgomery Lunatic Asylum, Bicton, near Shrewsbury, vice H. E. Ley, M.R.C.S.E., appointed to the Lancashire Lunatic Asylum, Prestwich.

SWEENIE, W. F., M.B., has been appointed Medical Attendant to the Royal Irish Constabulary at Carrigans and Newtown-Cunningham, Co. Londonderry.

THORNTON, P., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Bristol General Hospital, vice W. B. Slaughter, M.R.C.S.E., M.S.A., resigned.

WATERWORTH, E. A., M.B., has been appointed Surgeon to the Isle of Wight Artillery Militia, vice H. Waterworth, resigned.

WOOD, W. D., L.R.C.P.Ed., has been appointed Medical Officer for the Stanley-cum-Wrenthorpe District of the Wakefield Union, vice Thos. Walker, M.R.C.S.E., resigned.

YEO, Dr. B., has been appointed Hon. Physician to the Westminster Memorial Refuge at Streatham.

Births, Marriages, and Deaths.

BIRTHS.

AUSTEN.—On the 15th inst., at High-street, Ramsgate, the wife of Josiah Austen, L.R.C.P.I., of a son.

BAIRD.—On the 16th inst., at West-street, Congleton, the wife of James T. W. Baird, M.B., C.M., of a son.

BARTON.—On the 10th inst., at Hampton Court, the wife of Alfred B. Barton, M.D., of a daughter.

KING.—On the 14th inst., at Wellington-street, Wilton, the wife of Germain King, L.R.C.P.I., M.R.C.S.E., of a daughter.

LOWE.—On the 17th inst., at St. Mark's, Lincoln, the wife of Dr. G. M. Lowe, of a son.

PRICE.—On the 6th inst., at Kettering, the wife of J. Lowe Price, M.R.C.S.E., of a daughter.

WEST.—On the 18th inst., at Carlton House, Acock's-green, near Birmingham, the wife of J. F. West, F.R.C.S.E., of a daughter.

MARRIAGES.

ANDERSON—COUDROY.—On the 13th inst., at St. Peter's, Belsize-park, John Ford Anderson, M.D., to Gabrielle, daughter of Mons. L. Coudroy.

COTTON—CRANE.—On the 7th inst., at Christ Church, Cheltenham, Dr. Cotton, of Chargess-street, Piccadilly, to Eliza, widow of the Hon. Wm. Crane, of Sackville, New Brunswick.

SPENCER—HARVEY.—On the 13th inst., at Agra, India, Lionel Dixon Spencer, M.D., Bengal Medical Staff, youngest son of the late William Spencer, Esq., of Newcastle-on-Tyne, to Elizabeth Gordon Lamond, eldest daughter of Alex. Harvey, M.D., Professor of Materia Medica in the University of Aberdeen. (By Telegram.)

DEATHS.

BLYTHMAN.—On the 3rd inst., R. O. Blythman, M.R.C.S.E., of Swinton, Yorkshire, aged 69.

CHAPPELL.—On the 13th inst., J. C. Chappell, M.R.C.S.E., of George-street, Hanover-square, aged 58.

CLIFFORD.—On the 17th inst., at High Wycombe, J. Clifford, M.R.C.S.E., late of Windsor, aged 57.

DWYER.—On the 13th inst., Henry L. Dwyer, M.D., F.K.Q.C.P.I., of Upper Sackville-street, Dublin, aged 67.

GERMAN.—On the 18th inst., J. German, L.R.C.P.I., M.R.C.S.E., of Borrowash, Derby, aged 45.

HORNER.—On the 16th inst., at Rossborough-gardens, Pimlico, T. Horner, M.D., aged 43.

HOWLET.—On the 3rd inst., Wm. Howlet, M.R.C.S.E., of Wellington, Salop, aged 57.

STUART.—On the 16th inst., at Porchester-square, Hyde-park, John Stuart, L.R.C.S.Ed., of Roxburgh House, Kelso, aged 79.

THOMPSON.—On the 19th inst., suddenly, Joseph Thompson, Surgeon, of Nottingham, aged 63. Friends will please accept this intimation.

Medical Diary of the Week.

Monday, March 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Flower, "On the Comparative Anatomy of the Organs of Digestion in the Vertebrata."
MEDICAL SOCIETY OF LONDON.—8 P.M. Dr. Crisp, "On Three Cases of Sudden Death."—Mr. Coulson, "On Lithotomy after Lithotrity."

Tuesday, March 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations (expected), 3 P.M. Two Cases of Lithotrity, by Mr. Teevan.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Graily Hewitt, "On the Acquired Deformities of the Uterus, their Importance, Effects, and Results, with a Statistical Account of Observations on the subject at University College Hospital from 1865 to 1869."

Wednesday, March 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 3 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Flower, "On the Comparative Anatomy of the Organs of Digestion in the Vertebrata."

Thursday, March 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Friday, March 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, March 30.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

TANNER PRIZE AT KING'S COLLEGE.

WE hear that a little over £150 has been received towards the proposed Tanner Memorial, and whatever sum of money is collected is to be handed over to the Medical Board at King's College to invest, and with the interest to establish an annual prize of books or instruments to be selected by the student proving himself most proficient in Obstetrics and Diseases of Women. A prize of this kind is much wanted, and it is hoped that many King's men will join to make the amount of the prize better worthy of the name of Tanner and of the College of which he was a distinguished member. Subscriptions are to be forwarded to the Treasurer of the Tanner Fund, Dr. Percy Boulton, 6, Seymour-street, Portman-square.

Dr. J. B. Gill.—It is difficult to say what law the person referred to violates; but he should have no countenance from a qualified surgeon.

STÖHRER'S BATTERIES.

To the Editor of THE LANCET.

SIR,—Permit me respectfully to warn the profession against imitations of Dr. E. Stöhrer's batteries, both inductive and constant stream, which are being sent out as the genuine, as they may find themselves greatly deceived in the therapeutic effects now so well established in favour of Dr. E. Stöhrer's batteries.

Yours respectfully,
J. F. PRATT,
Agent to Dr. E. Stöhrer.

Oxford-street, March 16th, 1872.

THE CONVEYANCE OF SMALL-POX CONTAGION BY FLIES.

WE have received a copy of the Report of the Central Board of Health, Victoria, for 1871. One of the appendices to that Report contains an account of an outbreak of small-pox at Melbourne by the chief medical officer. The first case that occurred was in the person of a sailor, the mate of the barque *Avoncale*, who was a patient in the Melbourne Hospital. It appears that the vessel had recently arrived from Foo-Chow-Foo, having called at Anger on her way. The second case was that of a patient in the hospital, who had slept in the same room with the first. Subsequently many other persons were attacked who were connected with the hospital, and living at some distance from it. The three cases immediately succeeding those in the hospital, however, occurred in the neighbourhood of that institution, but had never been nearer than 98 yards of it. The wind was blowing in the direction, from the hospital, of the place where two of these patients were at the time, where they must have been imbibing the infection. The disease also appeared in a village called Greensborough, thirteen miles north-east of Melbourne, and then at Diamond Creek, five miles beyond that again. Dr. M'Crae, the chief medical officer, holds that all our knowledge and observation of the laws under which small-pox is propagated is opposed to the possibility of the contagion having been conveyed through the open air to a distance of 98 yards, and he quotes Haygarth's experiments, those of Prof. Ryan of Lyons, and the opinion of Dr. Murchison, to the effect that small-pox is not contagious in the open air at a distance of half a yard. Allowing for the difficulty of tracing the progress of the disease amongst a large population like that of Melbourne and its suburbs, Dr. M'Crae is disposed to believe that the disease was conveyed by the flies, which existed in immense numbers in the temporary small-pox hospital. In favour of the correctness of this hypothesis, he cites the facts observed in an epidemic of small-pox which occurred in Philadelphia, U.S.A., in 1823, under circumstances very similar to those which accompanied the outbreak described by him. The weather was very hot at the time, and in the course of the epidemic in Philadelphia cases of small-pox occurred in all directions, apparently from some unknown cause, whilst the known laws of contagion seemed to have been wholly disregarded.

Registration.—£5 for the first and 5*s.* for each additional qualification.

ALCOHOLIC PARAPLEGIA.

To the Editor of THE LANCET.

SIR,—I read Dr. Wilks's article on the above subject in your number of March 9th with much interest, and, with your permission, would add my mite of experience on the subject.

In about a dozen cases of habitual alcoholism which have come under my care during the past few years, there have been at least two well-marked cases of paraplegia. In both there was nothing in the symptoms, signs, or history to indicate the operation of any other cause of paralysis than alcoholic poisoning, and in each the affection disappeared in an uninterrupted and steady manner from the date of total suspension of alcoholic drinks.

In one case I exhibited phosphate of iron with strychnine and quinine, along with douchings of the spine and daily general bathing, and in the course of two months had the satisfaction of finding the patient restored from a condition in which he could hardly drag his limbs the distance of a hundred yards to one in which he was able to spend day after day in fly-fishing, walking ten and twenty miles at a stretch.

In the other case, beyond the use of chloral as a hypnotic for the first two or three weeks, during which time there were the pains in the legs of which Dr. Wilks speaks, together with pain and a burning sensation in the soles of the feet, I employed no medicine, but gave repeated cold douchings of the spine, together with rubbings and daily general bathing. In six weeks the patient could walk a distance of ten miles with ease. He had just recovered from an attack of delirium tremens when coming under my care, and could hardly walk the length of the room with the assistance of a stick.

In all cases of alcoholic poisoning I have invariably suspended the use of *stimulants* at once, and with the uniform result of seeing a steady and rapid improvement in all the symptoms. This is frequently a difficult course to pursue, however, especially when the gradual method has been adopted by the medical attendant in previous attacks. The patient will even allege that death is impending, and get his friends to believe him, so that a considerable degree of firmness and confidence is required on the part of the physician to withstand the pressure thus frequently brought to bear on him. The reward of seeing his patient recover in from half to one-third of the time required for the painful progress of the gradual method will, however, be a sufficient reward.

It is my belief that the use of the term *stimulant* as applied to alcohol, and which has gained a hold on the public mind, requiring a decade even to shake, is at the root of the popular prejudice in favour of a gradual withdrawal of its use. With the patient so prostrate and apparently feeble, as he usually is by the time medical aid is sought by the alarmed friends, a stimulant seems to be essential to his very existence; and when so many *professional* minds fail to be impressed with the manifest absurdity of continuing the operation of the cause of a disease at the same time that they attempt to cure it, we can hardly wonder at the public mind still cherishing the delusion. A depressant alcohol undoubtedly is, whatever its other qualities may be, and the sooner it is called by its proper name, and that of stimulant abjured by the profession, the sooner will popular prejudice, with its unhappy effects, disappear.

I am, Sir, your obedient servant,
WILLIAM B. HUNTER.

Forres, March 13th, 1872.

Dr. A. Sheen should apply to a resident medical officer of one of the metropolitan Small-pox and Fever Hospitals. He would be able probably to advise a nurse and a scale of wages.

Mr. R. H. Holmes (Newcastle) is thanked for his communications relative to "Hospital Sunday" in that town, which will always be acceptable.

HYGIENE OF STAYS.

Mr. Dixon, of Nottingham, has been good enough to forward us patterns of stays, which he thinks, regarded from a hygienic point of view, deserve commendation, and he asks us to pronounce an opinion on the merits of the article. This is not exactly a matter upon which we can say more than this, that stays often do a great deal of harm, and that as much from the mode in which they are used as the material out of which they are made. However, corset-makers have been looking about for a substitute for bone for years, and Mr. Dixon's invention meets certain requirements. It seems to us satisfactory. He employs cork, which gives the necessary firmness, with great flexibility, and after the cork is stitched into or on the corset or belt the latter is literally unbreakable. These corsets are porous, and in the summer cool in wear. The material moulds itself to the body with perfect ease so as to ensure the greatest comfort to the wearer. We think Mr. Dixon's invention good, and deserving of this notice at our hands.

J. A. B. (Glastonbury, Somerset.)—However much we may regret that members of the profession should stoop to soliciting employment by means of advertisements, we fear that our power to prevent it is very limited.

Spes.—We cannot insert any more letters on the position of unqualified assistants.

Cowie, (Wakefield.)—As far as we are aware it has not been tried in the way alluded to, at least in the human subject.

THE LOCAL TREATMENT OF SMALL-POX.

To the Editor of THE LANCET.

SIR,—I forward for insertion in your journal (if you think it worthy of a place there) the annexed communication, which, after due thought, I firmly believe deserves the careful consideration of the profession. I have patiently waited the results of the treatment in the cases in which I have tried it, and I think they justify me in submitting it to their judgment.

The present epidemic of small-pox, as is usually the case in all epidemics, has, I have no doubt, suggested various modes of treatment to medical practitioners, whose duties call them to treat this very offensive disease. I am not aware that any attempt has been made to treat it otherwise than constitutionally. Various suggestions have at different times been submitted to the profession of applications to prevent "pitting"; but no idea that I am aware of has been proposed of treating the disease itself locally; and yet, if we consider the progress of an ordinary case of small-pox, severe or otherwise (I omit hæmorrhagic variola as being beyond treatment from the incursion of the disease), the treatment by local means appears clearly indicated. After some forty-eight hours' febrile symptoms, more or less severe, a papular eruption makes its appearance, and concomitant with this eruption the primary fever subsides, the improvement being generally so marked that it is evident to the patient's friends. The papules progressing into vesicles, and the vesicles into pustules, are accompanied by the increasing "fever of suppuration," until at length, the whole cutaneous function being destroyed by the universal suppurating surface, the patient succumbs to the disease. It being thus evident that, the "primary fever" having subsided, the subsequent increase of serious symptoms keeps pace with the increasing local disease, it appears only reasonable to endeavour to arrest the local disease by local treatment. I and my partner, Mr. Quicke, have been trying to accomplish this in some nine or ten cases which have lately come under our care; and as cases of small-pox do not exist so much amongst the class of patients of which our practice consists, I strongly urge those of my medical brethren who have large experience in this disease to carry out my suggestion. My partner and myself have employed the liq. calc. sulph.; but I have no doubt other and less offensive applications will obtain the same result. From the known efficacy of preparations of sulphur in cutaneous affections, to which class of diseases I would now relegate variola, I think it desirable to employ those chiefly, and at present should wish them to try the liq. calc. sulph. of full strength. In every case in which we have tried it the patients praise it in glowing terms; and considering that the odour of the preparation is very objectionable, they would not, I think, be so warm in their praise of it unless they had proved its value.

A boy of some ten or eleven years of age, who on Sunday last first showed the papular rash *very thickly* spread over the face, and fairly abundant over the body, whose primary fever had been very violent, with wild delirium, had the lotion freely applied over the whole body. I saw him yesterday (Wednesday), and found him quite well; the papules remained papules, and proceeded no further in development, but showed minute crusts on the surface of each papule, and where several were clustered together, and would inevitably have become confluent, they remained *in statu quo*, arrested and destroyed. I am quite confident that had the disease been allowed to have its course, a serious and anxious case would have resulted; but by aid of the liq. calc. sulph. he is now in good health, with good appetite, and anxious to be up and down stairs.

This boy's father took the disease while nursing a friend, and when I first saw him the papules were becoming vesicles. By the application of the liq. calc. sulph. they *immediately* became pustular, and died away; but he tells me he has had no scabs, and, having seen the course of the disease in his friend, is astonished and delighted with the lotion, and, therefore when, upon his recovery, his son and wife were attacked, he immediately applied the lotion in the papular stage, with the remarkable result already stated.

In the whole of the cases treated by us the evidence of the patients is conclusive; and I think, whatever ultimate opinion the profession may form of this "cure for small-pox," they will not be justified without giving it a full and fair trial. Having treated the primary fever by constitutional means, my hope is that we may be enabled to treat with perfect success and satisfaction the cutaneous disease cutaneously, and that we may have arrived at the end of the horrors of small-pox. I must strongly insist on the free, copious, and universal application of the lotion, either laid on thickly and unsparingly with a brush or rubbed in with a glove at least three times a day, unless the skin (especially in the fixures of the joints) become sore. The injury to the mucous surfaces by variola I leave alone, only remarking that the condition of the mucous surfaces after cutaneous burns may lead by analogy to the hope that the speedy restoration of the skin to healthy function in small-pox may be accompanied by a healthy mucous surface.

I am, Sir, yours truly,

Hull, March 6th, 1872. HENRY CARNLEY, M.D.

POPULAR SCIENCE.

PROFESSOR PEPPER, who has so successfully catered for the public in the matter of popular science, has suddenly, it appears, severed his connexion with the Polytechnic, and has taken up his abode with his Ghost and its belongings at the Egyptian Hall, where he promises, by the aid of new and more perfect apparatus, to make the public still more fully acquainted with "the latest facts in science" in his instructive and amusing way.

A. B. M.—We wish that we knew of some means of stopping the circulation of the rubbish, of which our correspondent encloses a sample. Among the benefits of living in a free country, the liberty extended to ignorant people to publish and distribute such productions certainly cannot be included.

Dr. Stark, (Barrow-in-Furness.)—Copies of bills can be obtained of any Parliamentary bookseller.

APPLICATION OF THE DIAPASON TO CLINICAL AUSCULTATION.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Dec. 16th, 1871, there is an article by Dr. Griffiths, of Dublin, in which occurs the following passage:—"I am not aware that the idea of applying the diapason or any similar instrument to clinical auscultation has hitherto been suggested; but if so, I trust that I may be corrected, and that the credit of priority will be claimed by the originator."

In reply I beg to place the following before you. About seven years ago I was residing in the same house with a musician, who played on the double bass. I learnt from him the scale. One day I took a stethoscope, and placed one end (the distal) against my right mammary region, and ran the scale down till I came to C below the line in the bass. I next placed it over the right infra-mammary region, and ran the scale down to A below the line in the bass. In both cases I felt internal tremor or vibration apparently in the substance of the subjacent organs. This tremor or vibration was the result of a unison consonance. No note in harmonic relation gave any sensible vibration. I therefore conclude that, granting the viscera normal, which there is no reason for doubting, the pulmonic note is C below the bass staff, or, as I believe it is sometimes called, "double C bass." On the other hand, the hepatic note is A below the bass staff.

The following were the causes which induced me to make this experiment: First, whilst thoroughly appreciating the value of my former teacher's (Dr. W. H. Walshe's) opinion as to the importance of pitch, I had often doubted as to which was really the higher pitched note of two. Not daring to contradict those of more experience, but still unconvinced, I found I invariably agreed with an acknowledged good observer that *there was a difference*; but still I would frequently have differed from my earliest time of study as to which of the two was really of the higher pitch. A knowledge of the laws of consonance led me to this experiment. I tried to get a portable instrument made at the time, but, going to the wrong house for such a matter, did not succeed. I have often mentioned it in conversation with some of my professional brethren, as well as some of the intelligent non-professionals. Most probably some will see this paper and bear testimony thereto. Amongst others, I mentioned it to Dr. Stone, of St. Thomas's Hospital, whom I saw on his late visit to Trinidad. A few weeks ago, Dr. Walshe having kindly presented me with the last edition of his work, I there learnt that Dr. Stone was making, and had made, some observations with musical instruments upon the chest, which will be found in the last edition of Dr. Walshe's work on Diseases of the Lungs. On a visit a few days after to Dr. Walshe I mentioned these facts. Moreover, Messrs. Mayer and Meltzer, of Great Portland-street, have for some weeks been constructing for me an instrument, of which the musical part will be Stevenson's Æolian pitch-pipe. Their first attempt was only partially successful; but I have reason to believe a new instrument, which will be perfect, will ere long be produced. The double bass is perfect; but is, of course, out of the question as a clinical instrument for obvious reasons. It is even, I believe, not impossible to render sound self-registering, either by Dr. Tyndall's sensitive flame or by causing it to produce the characteristic figures.

This subject has been noticed by me in a work unpublished, which I hope ere long to lay before the profession.

I remain, Sir, yours truly,

T. P. O'DONOVAN, M.R.C.S.L.,
Late Surgeon and Acting-Physician to the Hospitals of St. Lucia.

Lancaster-road, Bayswater, March, 1872.

Mr. John Gaman, (Liverpool.)—Our correspondent or some of his friends might forward a copy of the publication to the head of the local police or to one of the borough magistrates, accompanied by a communication of the kind forwarded us. The address being given, there would be no difficulty in making some inquiries as to the "doctor" and his practices. We wish that we could see some more direct way of proceeding; but, in the present state of the law, we do not.

Dr. Buchanan will find the information he needs in the Formulary of Dr. Fox's work on Skin Diseases.

MEDICAL BENEVOLENT COLLEGE.

To the Editor of THE LANCET.

SIR,—Will you oblige me by publishing this letter in THE LANCET. I write about the income of the pensioners of the Medical College, Epsom, which it appears to me ought to be increased. £21 is less than most institutions of the kind; £1 per week is the general annuity. The Council have had some handsome bequests, but they are all spent on the boys. There are some residents in the College who have lost the narrow income they had through the failure of the Insurance Offices, and then the Council have allowed them to have joints of meat and bread, and this is liable to cause dissatisfaction amongst the others, some of whom have narrow means, and who were led to expect an increase when the funds of the College increased. Why not raise the income to £30 per annum, and withdraw the meat and bread? This would destroy the ill-feeling which at present exists.

I am, Sir, yours truly,

March, 1872. A LOOKER-ON.

Dr. C. F. Harding.—There are many sanitary duties which a local authority is legally bound to carry out, but which are neglected for want of a sufficient supervising authority, and some duties have, doubtless, been imposed in some Sanitary Acts which would have been as well left out. We are glad to observe, for example, that the word "trap" is not to be found in Mr. Stansfeld's Public Health Bill, and that it is replaced by the word "ventilation." If sewers are well constructed, and the water-supply adequate, there should be no need of traps in the public streets. If the sewers are foul, such traps only force the gases into the houses. All sewers should be ventilated by free openings, which may be protected by trays of charcoal.

HAY FEVER, OR SUMMER CATARRH.

To the Editor of THE LANCET.

SIR,—Having lately read a paper on this subject, and having had long personal acquaintance with the affection, perhaps you will kindly allow me briefly to sketch my experience.

My earliest acquaintance goes back to school days, where I was at first suspected of malingering; but the first decided and violent paroxysm I remember occurred while playing in a hay-field, a locality since those days rigidly avoided. From that time, however, up to 1868 (a period of some thirty-five years), when in Kurrachee, I suffered regularly every summer as it came round. Kurrachee during the months of susceptibility—viz., June, July, and August—possesses an unusually constant damp and windy climate from the S.W. monsoon. It is situated with the sea in front, and a howling desert around it; not a blade of grass visible; a barren, sandy, and rocky soil, treeless and verdureless, with no green thing,

"Where the bird dare not build,
Nor insect wing flit o'er the herbless granite."

Since my sojourn in it, however, in 1868 (including two years spent in England) I have been quite free of return of hay fever. The catarrh seems excited by the effluvia of flowering grasses in general, as much or more so than from those of the hay-field. The vicinity of coarse, rank vegetation, ripe and flowery, always caused intense irritation of, and secretion from, my Schneiderian membrane, and gave warning of what was coming. Attacks were in no way influenced by dryness or moisture of atmosphere; they were equally severe in India and England, amid the rain and fog of Simla, as the heat and dryness of Mean Mear with scanty rainfall and scorched up vegetation. No constitutional symptoms preceded the accessions, which commenced with coryza and intense itchings of the eyes and nostrils, distinguishing an attack of some months' duration from one of ordinary cold in the head. There was increased sensibility over the general surface of the face and scalp, as also of the retina, so that a sudden glare of sunshine or the daily operations of shaving and hair-brushing usually caused a violent paroxysm of sneezing of some forty or fifty repetitions in rapid succession, and with copious defluxion from eyes and nostrils. Such an affection can hardly, I think, be entirely free from the danger of rupture of some small cerebral vessel in elderly patients, and hæmorrhage from the nose was not infrequent. About five or six such paroxysms occurred daily, with some daily periodicity. Almost invariably after being in bed about a quarter of an hour there was a violent seizure; but at the same time never any insomnia, if anything the reverse. The mucous membrane from the eyes to the velum palati became chronically congested and swollen, pouring out a copious watery and muco-purulent discharge, excoriating the cheeks and lips, and rendering the voice thick and husky. The bronchial mucous membrane also became implicated; there was cough and wheezing, some dyspnœa on exertion, and copious expectoration. About August the symptoms abated, and gradually subsided, leaving some debility and depression and lowering of tone. The cause acted locally and definitely on the fifth pair of nerves, and, after continuing some thirty-five years, has now, I trust, lost its spell; at all events I have escaped since 1868. But I should mention my sense of smell has totally gone also. The susceptibility so long impressed on the pulmonary tract of mucous membrane is now (after a small dose of cholera poison in 1867) transferred to the gastric tract in the form of chronic diarrhœa, for which I was sent home in 1868, and which still occasionally gives me warning. I have served many years in India, and in very malarious stations, but never had an attack of ague. Kurrachee is not an attractive place; but I can imagine none in physical character so likely to suit a severe sufferer from this disease.

I remain, Sir, yours, &c.,
Kurrachee, February, 1872. H. D. FOWLER, Staff Surgeon-Major.

Pea-Sausage.—It is no doubt a very economical kind of diet for a limited time; but our correspondent is probably not aware that, like other things of this kind, when used exclusively, men very soon dislike it—at least that was the experience from its employment during the late war in France.

IF *Mr. W. A. Patchett* (Manchester) will kindly forward a short abstract of the case, it shall have attention.

MEDICAL ETHICS AT OXFORD.

To the Editor of THE LANCET.

SIR,—Allow me to say one word in reply to the letter of Mr. Symonds in your issue of this day. He admits that he did not do the very thing that he was called in to do—viz., give his opinion; but that, on the other hand, he did take charge of the patient that I had asked him to visit, without a word to me. The patient's friends tell me that Mr. Symonds refused to give an opinion till he had seen the case again (which Mr. Symonds does not deny), and that in a case so patent that the merest tyro could hardly make a mistake about it. Mr. Symonds adds that he wished to see me. But I was in Oxford, yet he neither called nor wrote. Further, even when I wrote to ask him about it, he took no notice of my letter till driven to do so by its publication. Mr. Symonds did not differ from me in opinion. Why, then, did he not state his opinion as requested? If he had done so I should have had no complaint to make, and his connexion with the case would have ended for the time, whether the patient asked him to call on a subsequent occasion or not. Mr. Symonds regrets that he had anything to do with the case. I can only say that the scantest courtesy to me would have spared him anything disagreeable in the matter, as I should not have had the slightest objection to hand the case over to him had I been informed that the patient desired it.

Yours obediently,
Oxford, March 16th, 1872. HENRY B. SPENCER.

Inquirens, (Farnborough.)—We consider that our correspondent is entitled to a fee, and it is entirely for him to forego the receipt of it, if he likes, on considering the position of the individual and the nature of the case. Half a guinea would appear to us to be a reasonable fee under the circumstances.

THE papers of *Dr. Lockhart Clarke, Dr. Hawkes,* and *Dr. Harris Ross* shall appear in our next number.

Q. Q.—The question has not yet been decided, but will receive attention at our hands at the proper time.

MASTER AND SERVANT (WAGES) BILL.

To the Editor of THE LANCET.

SIR,—With reference to the letter of "Gradatim" on the above Bill in your last impression, can you inform me if that gentleman is correct in his statement of the provisions of the Bill? and, if so, what course would you recommend to be taken in order to prevent the carrying out of those clauses relating to the power of deducting medical fees from the wages of certain classes of workmen?—the result of which would, I fear, be most unfavourable to the interests of many practitioners in mining and manufacturing districts, and not less so to those of the workmen themselves.

Yours truly,
March 19th, 1872. COUNTRY DOCTOR.

*** Our correspondent will find some observations on this subject in another column.—ED. L.

Students.—1. None.—2. To the title "physician," as understood by the profession, the claim is doubtful; but in its general sense, as one who professes the art of healing, it seems applicable to a licentiate of a College of Physicians.—3. None.—4. The qualification mentioned is a legal qualification in Medicine.

J. R. G., (Manchester.)—The information desired will be found in our Students' Number.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Bristowe; Dr. Pavy; Dr. A. W. Barclay; Mr. T. Bond; Mr. Poland; Mr. W. Hope; Mr. Banks; Dr. Abrath, Sunderland; Mr. Kendall; Mr. Bright, Glastonbury; Mr. Lawton; Mr. Knipe, Leigh Linton; Mr. Emery; Mr. Napier; Mr. Pinkess; Mr. H. Parnley, Hull; Mr. W. Roberts; Mr. J. Hammick; Dr. Hunter, Forres; Mr. Purdon, Stafford; Mr. Holmes, Newcastle-on-Tyne; Dr. Woodward; Mr. Anstey; Mr. Morgan, Bradford; Mr. Merlin; Dr. Waller, Peterborough; Dr. Youker, Prince Rupert's Land; Mr. Sidney; Mr. Campbell; Mr. Corcoran, Dundalk; Mr. R. Lewis; Mr. Pearson, Doncaster; Mr. Patchett, Manchester; Dr. Bottle, Birmingham; Mr. P. Hue, Stonham; Dr. Steel, Stafford; Dr. Hawkes, Hanwell; Dr. Ross, Brighton; Dr. Hughes, Woolwich; Dr. Harvey, Aberdeen; Dr. Sturmer, Hamburg; Mr. Holway; Mr. Johnson; Dr. Delvaille, Bayonne; Mr. T. Ward, Bath; Dr. Shepherd; Mr. Pratt; Mr. Coutts; Mr. Fowler, Kurrachee; Mr. Deane, Cawnpore; Mr. Robinson, Dorchester; Dr. Phillips; Mr. Spencer, Oxford; Mr. Percy; Mr. Macgowan; Mr. Greenway, Rochdale; Mr. F. Waterton; Dr. Bolton, Newcastle-on-Tyne; Mr. Blackford; Mr. Forder; Dr. Rogers; Mr. Torrance; Dr. Buchanan; Dr. Leslie; Mr. Hayman; Mr. Stevenson, Richmond; Mr. Holmford, Upnor; Mr. Leigh, Nottingham; Mr. Stenton; Mr. Everrett; Mr. Cooke; Mr. West; Mr. Keene; Dr. Heywood Smith; Dr. Cremer, Strasburg; Mr. Broderick, Colchester; Mr. Williams, Newport; Mr. Tolkien, Waterford; Mr. Howell; Mr. Corke; Mr. P. Thornton, Bristol; Mr. Morley, Limerick; Mr. Warren, Oundle; Mr. T. Kendrick; Mr. Stewart, Folkestone; Mr. Wyman; Mr. James, Sunderland; Mr. Lee; Dr. Yeo; Mr. Robertson; Mr. Taylor, Burnley; Surgeon-Major Annias, Madras; Mr. Anthony; Mr. Payne; Mr. J. Forster; Mr. Remy, Cardiff; Dr. Strange, Colney Hatch; Mr. Gaman, Liverpool; M. F. Foster, Wolverhampton; Mr. J. R. Taylor; Mr. W. J. Macrae; Dr. Middleton, Rusholme; Dr. King, Widnes; Dr. Baird, Congleton; Mr. Keen; A Looker-on; A Parish Doctor; L.R.C.P.I.; Inquirens Nummi; Tenax Honoris; Spes; One who has entered the Army; Country Doctor; &c. &c.

East London Observer, Western Daily Mercury, Labour and Unity, Money, Transactions of the Odontological Society, and *Isle of Man Times* have been received.

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